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BRISTOL BAY OCEANOGRAPHY AUGUST-SEPTEMBER, 1938

SPECIAL SCIENTIFIC REPORT–FISHERIES No. 311

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

SPECIAL NOTE

The International North Pacific Fisheries Commission, established in 1953 by the International Convention for the High Seas Fisheries of the North Pacific Ocean, coordinates the research of the member nations: Japan, Canada, and the United States. The resulting investigations provide data to the Commission for use in carrying out its duties in connection with fishery conservation problems in the North Pacific Ocean. Publication of this scientific report has been approved by the United States Section of the Commission.

United States Department of the Interior, Fred A. Seaton, Secretary
Fish and Wildlife Service, Arnie J. Suomela, Commissioner

BRISTOL BAY OCEANOGRAPHY, AUGUST-SEPTEMBER 1938

by

Felix Favorite, Oceanographer, and
Glenn Pedersen, Editorial Writer
Bureau of Commercial Fisheries

Contribution No. 11 to research conducted with the approval of the United States Section of the International North Pacific Fisheries Commission.

United States Fish and Wildlife Service
Special Scientific Report--Fisheries No. 311

Washington, D. C.
August 1959

TABLE OF CONTENTS

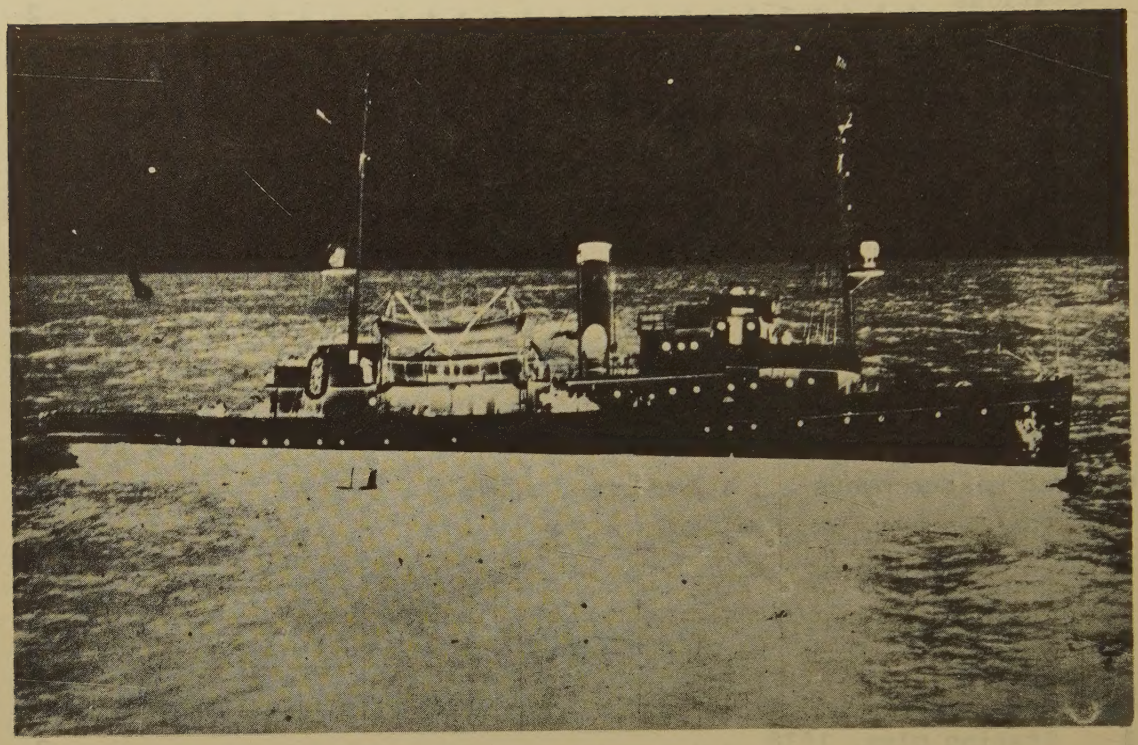
	Page
Introduction	1
Personnel and vessel	1
Observations	
Stations	2
Hydrographic casts	3
Bottom samples	3
Current measurements	3
Notes on tabulated data	3

TABLES

Station data	8
Current measurements	29

FIGURES

No.		
1	Station plan, 1938	2
2	Sketch of a modified Ekman dredge	3
3	Horizontal contours of surface and bottom temperatures, Bristol Bay, August 1938	5
4	Horizontal contours of surface and bottom temperatures, Bristol Bay, September 1938	5
5	Horizontal contours of surface and bottom salinities, Bristol Bay, August 1938	6
6	Horizontal contours of surface and bottom salinities, Bristol Bay, September 1938	6
7	Vertical profiles of salinity and density from Cape Seniavin to Cape Newenham	7
8	Vertical profiles of salinity and density seaward from Cape Chichagof	7



U. S. Coast Guard Tug Redwing

BRISTOL BAY OCEANOGRAPHY, AUGUST-SEPTEMBER 1938

by

Felix Favorite and Glenn Pedersen
U. S. Fish and Wildlife Service
Seattle, Washington

ABSTRACT

Oceanographic observations tabulated from the files of the U. S. Fish and Wildlife Service and from the official logs of the U. S. Coast Guard Tug Redwing present values of temperature, salinity, density, dynamic heights, and dissolved oxygen at 128 stations, current measurements at 29 stations including 4 tidal cycles, and descriptions of the bottom from samples at 56 stations. Several horizontal and vertical sections of temperature, salinity, and density have been constructed to show the gross features of the oceanographic conditions in the eastern section of Bristol Bay, Alaska.

INTRODUCTION

This report supplements current investigations of the distribution and migration of salmon in the North Pacific Ocean and the Bering Sea. Data from the field logs kept during the oceanographic work of the Bureau of Fisheries in Bristol Bay in August and September 1938 have been analyzed and tabulated. The results of exploratory fishing in the area during 1939-41 have been published by Barnaby 1/.

The 1938 oceanographic studies using State Department funds were planned to provide information on the movement of salmon in the ocean, but the time available for these studies was limited. Accordingly, since a knowledge of the oceanography of the area was considered essential, an oceanographic data survey was conducted following a program planned by Dr. T. G. Thompson of the University of Washington. Observations were made aboard the U. S. Coast Guard Tug Redwing equipped to make hydrographic casts, measure currents, and obtain bottom samples.

Grateful acknowledgement is made to the Commandant, U. S. Coast Guard, for loaning the official logs of the U. S. Coast Guard Tug Redwing and to Joseph T. Barnaby of the U. S. Fish and Wildlife Service for describing procedure and details not recorded in the field logs.

PERSONNEL AND VESSEL

Joseph T. Barnaby	Biologist in Charge
John H. Lincoln	Oceanographer
Walter C. Sands	Oceanographer
USCG Tug Redwing	J. A. Fletcher, Lt., USCG, Captain

The Redwing was a steam-driven vessel with a hull of wood and steel, measuring in length 187 feet 10 inches, beam 35 feet 6 inches, draft 12 feet 4 inches, and displacing 1,210 tons.

1/ Barnaby, Joseph T., 1952. Offshore fishing in Bristol Bay and Bering Sea. U. S. Fish and Wildlife Service, Special Scientific Report--Fisheries No. 89, 30 pp.

OBSERVATIONS

Stations

Sampling stations were located on a grid which covered and surrounded Bristol Bay (fig. 1). The grid was bounded on the northwest by a line between Nunivak Island and the Pribilofs and then generally by the thousand fathom curve to 170° W. north of the Aleutian Chain and to the Shumagin Island area south of the Chain. The grid, composed of 17 perpendicular sections and 20 parallel lines relative to the Chain, would have provided a complete coverage of the area of investigation: the sections, set 20 miles apart, consisted of two rows of stations at 10-mile intervals, the rows also 10 miles apart; the lines were also set 20 miles apart but consisted of only one row of stations at the same interval.

Although effort was made to occupy the exact locations of the stations as laid out, the almost continuous inclement weather and short working season necessitated many deviations from the original plan. During the 4-week season in 1938, August 6 to September 7, only the first four sections and parts of five of the lines were completed in inner Bristol Bay. Thus, we have renumbered the station positions according to the consecutive hydrographic casts, which maintain the continuity of the oceanographic observations. The Redwing was anchored on nearly every station until August 24 (Station 67); thereafter the vessel drifted during the hydrographic casts.

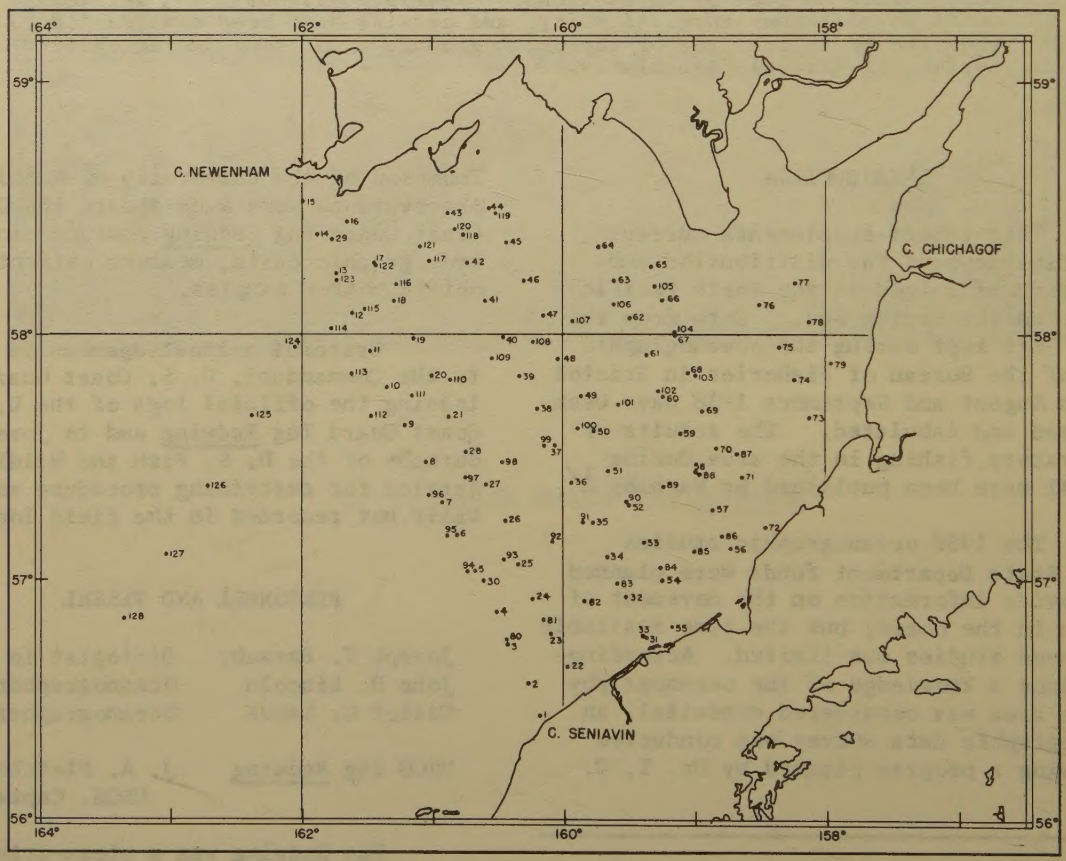


Figure 1.--Station plan, 1958.

At the beginning of the cruise, the sampling routine at each station generally required an hour when all three observations were made: hydrographic cast, current measurement, bottom sampling. Later in the cruise only the hydrocast was taken which reduced the time on each station to about 20 minutes.

Hydrographic Casts

Reversing water bottles were cast at the surface, 5 and 10 meters, and 10-meter intervals thereafter to the bottom; occasionally the final spacing was only 5 meters. Each water bottle carried one protected thermometer.

Samples were drawn for analysis of chlorinity and dissolved oxygen at all depths.

Bottom Samples

Bottom samples were obtained at stations 1-15, 17, 18, 22-28, 30, 31, 46, 47, and 60 with an Ekman dredge modified by adding bars of metal to increase its weight and stability (fig. 2). Descriptions of the bottom at these locations are listed under the respective station headings.

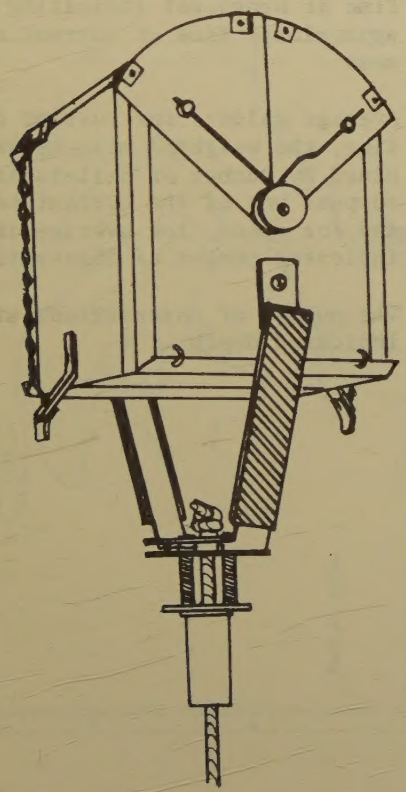


Figure 2.--Sketch of a modified Ekman dredge.

Current Measurements

Currents were measured at the surface by drift stick observed from the anchored vessel and at 5 meters and the bottom by Ekman or Gurley-Price current meter at most of the stations from 1 to 33. In addition, weather permitting, measurements were made at approximately 2-hour intervals for partial or complete tidal cycles at stations 11, 29, 30, and 31. Only drift stick observations were made from stations 37 to 66.

Field logs indicated the direction of the current at 5 meters, but these are questionable because of the magnetic influence of the ship's hull. Compass deviations up to 80° were reported when the Ekman meter was held above the water, parallel to the vessel. Conversion from magnetic to true direction was made by applying 19° E. variation.

Some data from the Gurley-Price meter which were recorded as revolutions per minute were converted from a graph of RPM vs velocity constructed from complete experimental data.

NOTES ON TABULATED DATA

Hydrographic Casts

Station description

Position determined by

(1) Dead reckoning
(2) Bearings
(3) Sights within 4 hours

Messenger time and date, GCT

Weather condition

b blue sky, cloudless
c cloudy
d drizzle
f fog
m mist
o overcast
p passing showers of rain
r rain
v variable
z hazy

Barometer, in inches

Wind

Direction

Force in Beaufort scale

Sea

Direction

Height

0	No swell	Calm or light sea
1	Moderate swell	Calm or light sea
2	Heavy swell	Calm or light sea
3	No swell	Moderate sea
4	Moderate swell	Moderate sea
5	Heavy swell	Moderate sea
6	Rather rough sea	
7	Rough sea	
8	Very rough sea	
9	Mountainous sea	

Temperature, in °F

Depth

Bottom

G	gravel
S	sand
crs	coarse
fne	fine
bk	black
gy	grey

Observed Data

z	(m)	Depth in meters
T	(°C)	Temperature observed from reversing thermometer
S	(°/oo)	Salinity as defined from chlorinity
O_2	(mgat/L)	Dissolved oxygen content

Values in parentheses are interpolated.

Computed Data

Calculations were done on an IBM 650, Magnetic Drum Data-Processing Machine, at the computer center of the University of Washington, by using formulas presented in Oceanographic Data Processing by Automatic Methods, U. S. Hydrographic Office, 31 January 1955.

σt (g/L)	Density, defined by (specific gravity - 1) x 1000, expressed as grams per liter
ΔD (dyn m)	Anomaly of dynamic height, in dynamic meters, of the sea surface relative to the indicated depth in meters

Chemistry

Water samples were analyzed for chlorinity by the Knudsen method and dissolved oxygen by the Winkler method.

Current Measurements

*	Time of hydrocast indicating the approximate time of current measurement
( )	Average value: for current direction, the weighted mean as determined by number of pellets in compass box of the current meter, and for speed, the average of the indicated number of observations.
/ /	The number of observations at the indicated depth

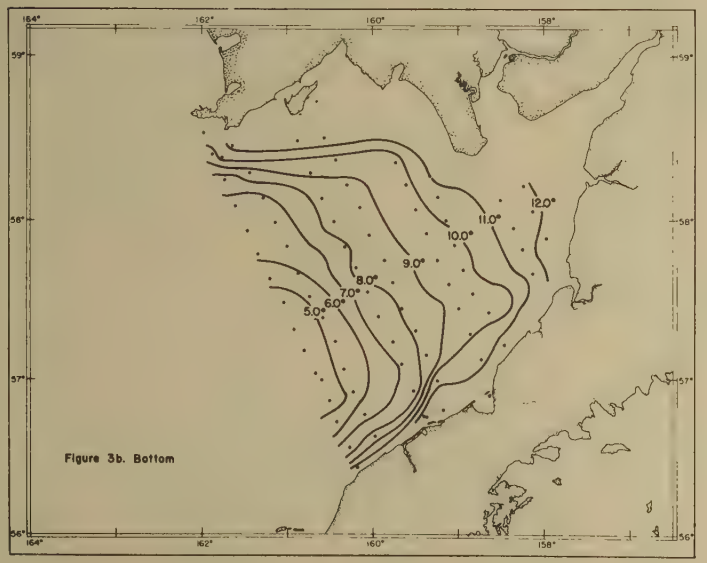


Figure 3.--Horizontal contours of surface and bottom temperatures, Bristol Bay, August 1938.

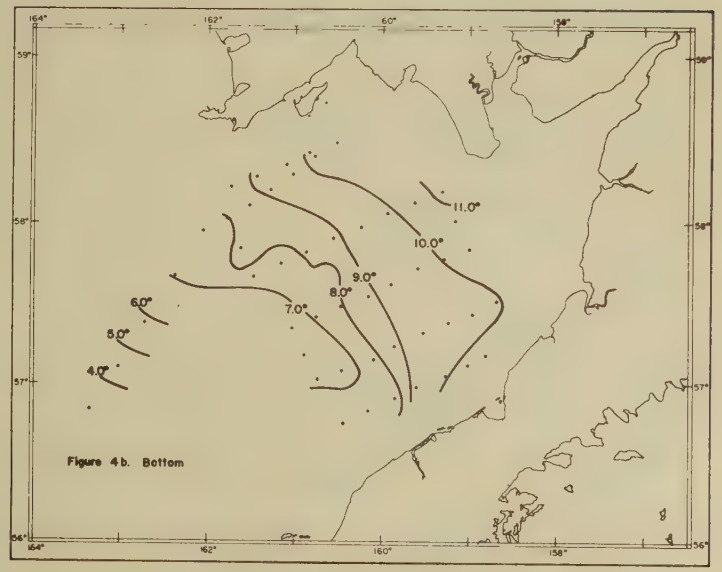


Figure 4.--Horizontal contours of surface and bottom temperatures, Bristol Bay, September 1938.

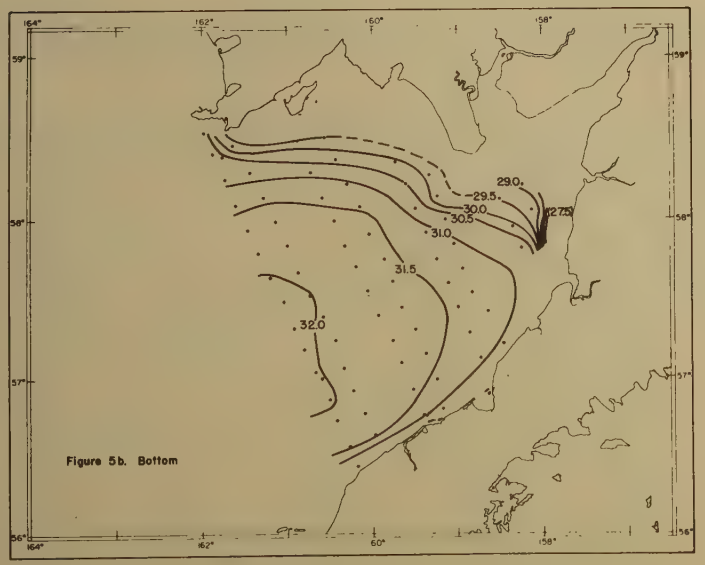


Figure 5.--Horizontal contours of surface and bottom salinities, Bristol Bay, August 1938.

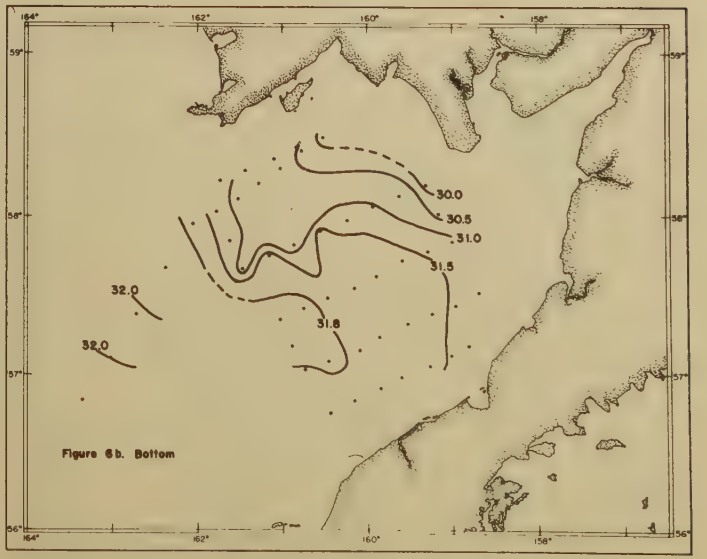
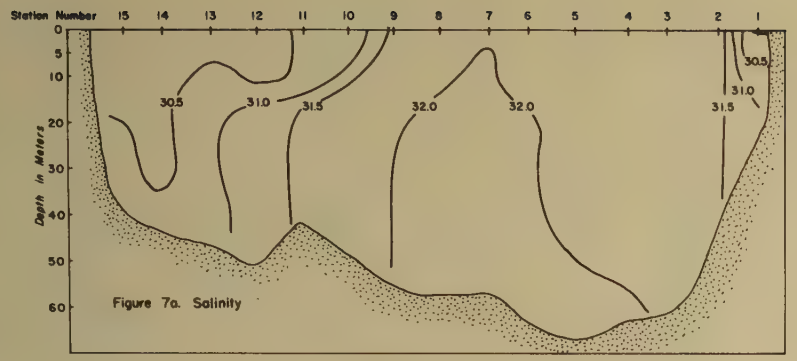


Figure 6.--Horizontal contours of surface and bottom salinities, Bristol Bay, September 1938.



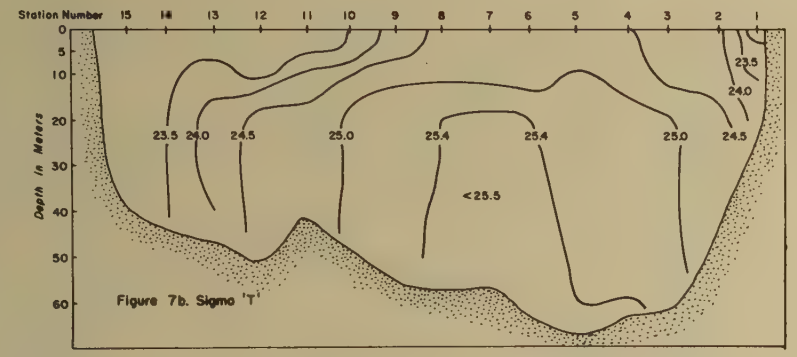
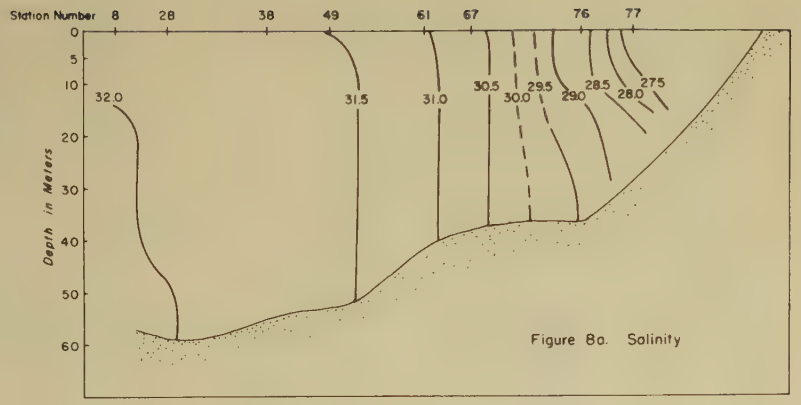


Figure 7.--Vertical profiles of salinity and density from Cape Seniavin to Cape Newenham.



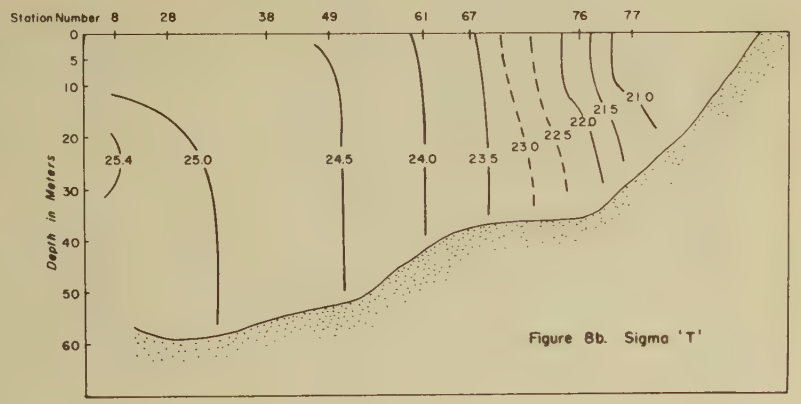


Figure 8.--Vertical profiles of salinity and density seaward from Cape Chichagof.

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 1						
56° 26' N, 160° 11' W (2)	0	11.25	29.96	22.84	.000	0.553
0945 GCT, 7 August 1938	5	10.47	30.43	23.34	.024	0.547
Wea. o,m Bar. 30.25	10	10.17	30.53	23.46	.046	0.538
Wind ∅ Sea ∅						
Temp: dry 54, wet —						
Depth 21 m., Bottom crs bk S						
Station 2						
56° 35' N, 160° 17' W (1)	0	11.02	31.58	24.13	.000	0.567
1145 GCT, 7 August 1938	5	11.07	31.60	24.14	.019	0.564
Wea. b,c Bar. 30.26	10	10.68	31.60	24.21	.038	0.579
Wind WSW,2 Sea W,1	20	8.07	31.60	24.62	.073	0.525
Temp: dry 52, wet 51	30	8.05	31.60	24.62	.106	0.520
Depth 42.5 m., Bottom crs bk S	40	7.95	31.60	24.64	.139	0.514
Station 3						
56° 44' N, 160° 26' W (1)	0	10.54	31.73	24.33	.000	0.630
1415 GCT, 7 August 1938	5	10.60	31.73	24.32	.018	0.631
Wea. c Bar. 30.26	10	10.42	31.74	24.36	.036	0.632
Wind WSW,2 Sea SW,1	20	5.94	31.78	25.04	.069	0.512
Temp: dry 52, wet 51	30	5.89	31.78	25.05	.098	0.504
Depth 61 m., Bottom fne gy S	40	5.86	31.78	25.05	.127	0.500
	50	5.75	31.78	25.06	.156	0.507
	55	5.66	31.82	25.11	.171	0.497
Station 4						
56° 53' N, 160° 32' W (2)	0	10.24	31.89	24.51	.000	0.621
1625 GCT, 7 August 1938	5	10.30	31.85	24.47	.017	0.619
Wea. c Bar. 30.27	10	9.01	31.89	24.71	.034	0.656
Wind SW,2 Sea SW,1	20	5.17	31.91	25.23	.064	---
Temp: dry 52, wet 51	30	4.69	31.92	25.29	.091	0.534
Depth 63 m., Bottom fne gy S	40	4.59	31.92	25.30	.118	---
	50	4.51	31.94	25.33	.145	---
	60	4.41	32.05	25.43	.171	0.579

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 5						
57° 02' N, 160° 41' W (2)	0	10.19	31.83	24.47	.000	0.618
1905 GCT, 7 August 1938	5	9.83	31.83	24.53	.017	0.628
Wea. c Bar. 30.27	10	6.38	31.92	25.10	.033	0.579
Wind SSW,2 Sea SW,1	15	5.29	31.94	25.24	.047	0.541
Temp: dry 54, wet 53	20	4.65	31.96	25.33	.060	0.539
Depth 67 m., Bottom fne gy S	30	4.58	31.96	25.34	.087	0.538
	40	4.42	31.98	25.37	.113	0.541
	50	4.36	32.00	25.39	.139	0.543
	60	4.29	32.00	25.40	.165	0.531
Station 6						
57° 11' N, 160° 49' W (3)	0	10.53	31.87	24.44	.000	0.611
2130 GCT, 7 August 1938	5	10.57	31.87	24.44	.017	0.609
Wea. c Bar. 30.29	10	9.16	31.89	24.69	.034	0.619
Wind SSW,2 Sea SW,1	20	4.22	32.01	25.41	.064	0.557
Temp: dry 54, wet 53	30	4.20	32.01	25.41	.089	0.560
Depth 64 m., Bottom fne gy S	40	4.13	32.01	25.42	.115	0.559
	50	4.10	32.01	25.43	.141	0.559
	60	4.10	32.01	25.43	.166	0.546
Station 7						
57° 19' N, 160° 56' W (3)	0	9.86	31.94	24.61	.000	0.590
2350 GCT, 7 August 1938	5	9.92	32.01	24.66	.017	0.592
Wea. c Bar. 30.30	10	8.78	31.98	24.81	.033	0.654
Wind SSW,2 Sea SW,1	20	4.16	32.07	25.47	.061	0.564
Temp: dry 55, wet 54	30	4.11	32.05	25.46	.086	0.559
Depth 56.5 m, Bottom fne gy S	40	4.08	32.09	25.49	.112	0.559
	50	4.07	32.05	25.46	.137	0.565
Station 8						
57° 29' N, 161° 05' W (1)	0	9.91	31.94	24.60	.000	0.653
0155 GCT, 8 August 1938	5	9.39	31.91	24.66	.017	0.664
Wea. c Bar. 30.30	10	8.04	31.96	24.91	.032	0.641
Wind SSW,2 Sea SW,1	20	4.66	32.05	25.40	.061	0.555
Temp: dry 53, wet 52	30	4.59	32.05	25.41	.087	0.555
Depth 57 m., Bottom fne gy S	40	4.06	32.07	25.48	.112	0.555

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 9						
57° 38' N, 161° 13' W (3)	0	10.21	31.55	24.25	.000	0.608
0345 GCT, 8 August 1938	5	10.29	31.55	24.24	.018	0.608
Wea. c Bar. 30.29	10	8.05	31.85	24.82	.036	0.674
Wind SSW,2 Sea SW,2	15	6.02	31.96	25.17	.050	0.583
Temp: dry 53, wet 52	20	(5.72)	31.98	25.23	.064	0.555
Depth 55 m., Bottom fne gy S	30	5.48	32.00	25.27	.092	0.551
	40	5.38	32.01	25.29	.119	0.552
	50	5.20	32.01	25.31	.146	0.548
Station 10						
57° 47' N, 161° 21' W (1)	0	10.24	30.59	23.50	.000	0.607
0605 GCT, 8 August 1938	5	10.19	30.62	23.53	.022	0.608
Wea. c Bar. 30.29	10	7.59	31.40	24.53	.041	0.599
Wind SSE,2 Sea SW,1	20	(6.23)	31.82	25.04	.073	---
Temp: dry 52, wet 51	30	6.13	31.83	25.06	.102	0.549
Depth 48 m., Bottom fne gy S	40	6.13	31.83	25.06	.131	0.556
	45	6.13	31.83	25.06	.146	0.556
Station 11-1						
57° 56' N, 161° 28' W (1)	0	10.32	30.64	23.53	.000	0.445
0900 GCT, 8 August 1938	5	10.39	30.64	23.51	.022	0.584
Wea. o Bar. 30.28	10	7.32	30.64	23.97	.043	0.564
Wind SSW,2 Sea SW,1	20	6.74	31.62	24.82	.078	0.549
Temp: dry 52, wet 51	30	(6.72)	31.62	24.82	.110	0.553
Depth 41 m., Bottom fne gy S	35	6.71	31.62	24.82	.125	0.550
Station 11-2						
1220 GCT, 8 August 1938	0	10.13	30.66	23.57	.000	0.585
Wea. o Bar. 30.26	5	10.05	30.64	23.57	.022	0.586
Wind SSE,2 Sea SW,1	10	9.26	30.77	23.79	.043	0.587
Temp: dry 53, wet 52	20	6.78	31.55	24.76	.079	0.544
Depth 41 m.	30	6.78	31.56	24.76	.111	0.544
	35	6.77	31.56	24.77	.127	0.547

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 11-3						
1405 GCT, 8 August 1938	0	10.19	30.61	23.52	.000	0.576
Wea. c Bar. 30.25	5	10.43	30.64	23.51	.022	0.573
Wind SSE,2 Sea SW,1	10	9.60	30.73	23.71	.043	0.590
Temp: dry 53, wet 52	20	6.81	31.53	24.74	.080	0.547
Depth 41.5	30	6.80	31.55	24.75	.113	0.547
	35	6.76	31.55	24.76	.129	0.543
Station 11-4						
1615 GCT, 8 August 1938	0	10.18	30.52	23.45	.000	0.588
Wea. o Bar. 30.21	5	10.27	30.55	23.46	.022	0.585
Wind SE,2 Sea SE,1	10	8.12	30.95	24.10	.043	0.572
Temp: dry 53, wet 52	20	6.79	31.55	24.76	.078	0.545
	30	6.79	31.55	24.76	.110	0.544
	35	6.76	31.55	24.76	.126	0.546
Station 11-5						
1830 GCT, 8 August 1938	0	10.22	30.52	23.45	.000	0.581
Wea. o Bar. 30.18	5	10.25	30.50	23.43	.022	0.575
Wind SE,3 Sea SE,2	10	8.06	30.95	24.11	.043	0.563
Temp: dry 52, wet 52	20	6.79	31.53	24.74	.078	0.538
	30	6.80	31.53	24.74	.110	0.541
	35	6.76	31.55	24.76	.126	0.543
Station 12						
58° 06' N, 161° 37' W (1)	0	10.40	30.41	23.33	.000	0.583
2050 GCT, 8 August 1938	5	10.40	30.39	23.32	.023	0.584
Wea. o Bar. 30.13	10	10.18	30.43	23.38	.046	0.584
Wind SE,3 Sea SE,2	20	6.74	31.35	24.61	.085	0.540
Temp: dry 53, wet 52	30	6.70	31.40	24.65	.118	0.539
Depth 51 m., Bottom fne G S	40	6.68	31.44	24.68	.151	0.540
	45	6.69	31.44	24.68	.167	0.435

STATION DESCRIPTION	Z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 21						
57° 40' N, 160° 53' W (1)	0	10.22	30.88	23.73	.000	0.615
0620 GCT, 11 August 1938	5	10.28	30.84	23.69	.021	0.614
Wea. o,v Bar. 29.91	10	9.22	31.47	24.35	.041	0.635
Wind SSW,5 Sea SW,4	20	5.97	31.92	25.15	.073	0.539
Temp: dry 54, wet 53	30	5.96	31.92	25.15	.101	0.539
Depth 55 m.	40	5.95	31.92	25.15	.129	0.539
	50	5.98	31.92	25.15	.157	0.538
Station 22						
56° 38' N, 159° 58' W (1)	0	10.74	31.58	24.18	.000	0.560
1510 GCT, 12 August 1938	5	10.81	31.62	24.20	.019	0.533
Wea. o,r Bar. 30.22	10	10.78	31.60	24.19	.037	0.551
Wind S,1 Sea SW,2	20	10.72	31.60	24.20	.075	0.552
Temp: dry 52, wet 51	30	9.19	31.51	24.38	.111	0.515
Depth 43 m., Bottom bk S	40	8.60	31.51	24.47	.146	0.502
Station 23						
57° 47' N, 160° 06' W (1)	0	10.89	31.65	24.21	.000	0.562
1730 GCT, 12 August 1938	5	10.94	31.69	24.24	.019	0.564
Wea. o,a Bar. 30.21	10	10.95	31.73	24.26	.037	0.567
Wind N,1 Sea W,2	20	8.81	31.73	24.61	.072	0.553
Temp: dry 52, wet 51	30	6.94	31.73	24.88	.104	0.503
Depth 57 m., Bottom fne gy S	40	6.47	31.76	24.96	.135	0.501
	50	6.45	31.78	24.98	.165	0.503
Station 24						
56° 55' N, 160° 14' W (1)	0	10.11	31.76	24.43	.000	0.583
1945 GCT, 12 August 1938	5	10.07	31.82	24.48	.017	0.581
Wea. c Bar. 30.16	10	9.96	31.82	24.50	.035	0.580
Wind ENE, 1 Sea W, 2	20	5.46	31.85	25.15	.066	0.513
Temp: dry 52, wet 52	30	5.33	31.87	25.18	.094	0.505
Depth 63 m., Bottom S	40	5.32	31.85	25.17	.122	0.513
	50	5.35	31.85	25.17	.150	0.503
	60	5.30	31.87	25.19	.178	0.503

STATION DESCRIPTION	Z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 25						
57° 04' N, 160° 21' W (3)	0	9.38	31.78	24.56	.000	0.617
2127 GCT, 12 August 1938	5	9.36	31.76	24.55	.017	0.619
Wea. c Bar. 30.14	10	9.27	31.78	24.58	.034	0.608
Wind ENE,1 Sea W,2	20	5.50	31.89	25.18	.065	0.522
Temp: dry 53, wet 52	30	5.46	31.89	25.18	.093	0.512
Depth 64 m., Bottom fne gy S	40	5.40	31.91	25.21	.120	0.521
	50	5.41	31.91	25.21	.148	0.522
	60	5.44	31.92	25.21	.176	0.528
Station 26						
57° 14' N, 160° 27' W (3)	0	9.35	31.77	24.56	.000	0.624
2305 GCT, 12 August 1938	5	(9.30)	31.78	24.58	.017	0.621
Wea. c Bar. 30.12	10	9.00	31.83	24.66	.034	0.603
Wind ENE,3 Sea W,2	20	5.31	31.96	25.26	.064	0.532
Temp: dry 53, wet 52	30	5.20	31.94	25.25	.091	0.531
Depth 61.5 m., Bottom fne gy S	40	5.20	31.96	25.27	.118	0.530
	50	5.20	31.94	25.25	.145	0.528
	57	5.15	31.96	25.28	.164	0.528
Station 27						
57° 24' N, 160° 36' W (1)	0	9.53	31.89	24.63	.000	0.629
0013 GCT, 13 August 1938	5	9.49	31.87	24.62	.017	0.630
Wea. c Bar. 30.08	10	9.25	31.89	24.67	.033	0.304
Wind ENE,2 Sea W,2	20	5.94	31.96	25.18	.064	0.543
Temp: dry 53, wet 52	30	5.31	31.96	25.26	.091	0.518
Depth 61 m., Bottom fne gy S	40	5.25	31.96	25.26	.118	0.518
	50	5.17	31.96	25.27	.146	0.518
	57	5.14	36.98	25.29	.164	0.517
Station 28						
57° 32' N, 160° 45' W (1)	0	9.30	31.89	24.66	.000	0.622
0245 GCT, 13 August 1938	5	9.29	31.91	24.68	.016	0.626
Wea. o,f,m Bar 30.07	10	9.08	31.91	24.71	.033	0.612
Wind ENE, 3 Sea W,2	20	6.04	31.94	25.16	.063	0.541
Temp: dry 50, wet 49	30	5.66	31.96	25.22	.091	0.529
Depth 59 m., Bottom fne gy S	40	5.61	31.96	25.22	.119	0.524
	50	5.17	32.01	25.31	.146	0.524
	55	5.06	32.01	25.33	.159	0.523

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O2 (mgat/L)
Station 13						
58° 14' N, 161° 45' W (3)	0	10.45	30.34	23.27	.000	0.578
2340 GCT, 8 August 1938	5	10.45	30.34	23.27	.023	0.582
Wea. o,p Bar. 30.11	10	8.63	30.64	23.79	.045	0.566
Wind SE,3 Sea SE,2	20	7.69	30.90	24.13	.085	0.551
Temp: dry 54, wet 52	30	7.62	30.91	24.14	.122	0.548
Depth 46 m., Bottom fne G S	40	7.59	30.72	24.00	.161	0.557
Station 14						
58° 24' N, 161° 53' W (2)	0	9.94	30.41	23.41	.000	0.548
0140 GCT, 9 August 1938	5	9.99	30.41	23.40	.022	0.554
Wea. o Bar. 30.09	10	10.01	30.41	23.40	.045	0.554
Wind SE,4 Sea SE,2	20	9.99	30.41	23.40	.090	0.555
Temp: dry 53, wet 51	30	(9.92)	30.44	23.43	.135	0.542
Depth 43.5 m., Bottom fne G	40	9.83	30.55	23.53	.179	0.531
Station 15						
58° 32' N, 162° 00' W	0	10.81	30.48	23.32	.000	0.518
0345 GCT, 9 August 1938	5	10.86	30.46	23.29	.023	0.519
Wea. o,v Bar. 30.02	10	10.88	30.46	23.29	.046	0.528
Wind SE,5 Sea SE,4	20	10.84	30.50	23.33	.092	0.527
Temp: dry 53, wet 51	30	10.80	30.53	23.36	.137	0.518
Depth 39.5 m., Bottom crs S	35	10.95	30.55	23.35	.160	0.517
Station 16						
58° 27' N, 161° 39' W (2)	0	11.04	29.56	22.57	.000	0.525
1930 GCT, 10 August 1938	5	11.10	29.54	22.54	.027	0.539
Wea. o,m Bar. 30.00	10	11.10	29.58	22.57	.053	0.529
Wind S,6 Sea SW,6	20	11.06	29.60	22.59	.106	0.527
Temp: dry 51, wet 51	25	11.03	29.60	22.60	.132	0.525
Depth 27 m.						

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O2 (mgat/L)
Station 17						
58° 17' N, 161° 27' W (3)	0	10.84	29.58	22.62	.000	0.538
2212 GCT, 10 August 1938	5	10.91	29.55	22.58	.026	0.545
Wea. o Bar. 30.02	10	10.95	29.60	22.61	.053	0.538
Wind SSW,5 Sea SW,5	20	10.08	30.10	23.14	.103	0.544
Temp: dry 52, wet 52	30	8.35	30.70	23.88	.146	0.525
Depth 37 m., Bottom G S	34	8.17	30.73	23.93	.163	0.524
Station 18						
58° 08' N, 161° 18' W (1)	0	9.47	30.52	23.57	.000	0.557
0020 GCT, 11 August 1938	5	9.48	30.50	23.55	.022	0.559
Wea. d Bar. 30.00	10	(9.48)	30.66	23.67	.043	0.551
Wind SSW,4 Sea SW,4	20	7.04	31.35	24.57	.081	0.534
Temp: dry 55, wet 52	30	6.79	31.42	24.65	.115	0.529
Depth 43 m., Bottom fne gy S	40	(6.80)	31.46	24.68	.148	0.529
Station 19						
57° 59' N, 161° 09' W (1)	0	10.59	30.64	23.48	.000	0.596
0230 GCT, 11 August 1938	5	10.65	30.64	23.47	.022	0.597
Wea. o Bar. 29.95	10	10.64	30.66	23.49	.044	0.599
Wind SSW,5 Sea SW,4	20	6.58	31.74	24.93	.081	0.530
Temp: dry 54, wet 53	30	6.55	31.74	24.94	.112	0.528
Depth 46 m.	40	6.55	31.74	24.94	.142	0.524
Station 20						
57° 50' N, 161° 01' W (1)	0	10.33	30.72	23.58	.000	0.609
0425 GCT, 11 August 1938	5	10.39	30.73	23.58	.022	0.611
Wea. o,v Bar. 29.92	10	10.40	30.73	23.58	.043	0.612
Wind SSE,5 Sea SW,4	20	6.28	31.82	25.03	.079	0.527
Temp: dry 54, wet 53	30	6.26	31.82	25.03	.109	0.527
Depth 45 m.	40	6.26	31.82	25.03	.138	0.525

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ_t (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 29-1						
58° 23' N, 161° 46' W (2)	0	11.05	30.52	23.31	.000	0.551
1030 GCT, 13 August 1938	5	10.78	30.53	23.36	.023	0.546
Wea. o,p Bar. 30.06	10	10.66	30.55	23.40	.045	0.543
Wind NE,3 Sea W,1	20	10.49	30.64	23.50	.090	0.524
Temp: dry 50, wet 49	30	9.-	30.64	-	-	0.521
Depth 36 m.	34	9.-	30.64	-	-	0.521
Station 29-2						
1215 GCT, 13 August 1938	0	11.22	30.53	23.29	.000	---
Wea. c Bar. 30.05	5	10.71	30.59	23.42	.023	0.557
Wind ∅ Sea W,1	10	10.68	30.57	23.41	.045	0.552
Temp: dry 51, wet 50	20	10.55	30.64	23.49	.090	0.533
	30	10.43	30.68	23.54	.133	0.522
	34	10.43	30.68	23.54	.151	0.521
Station 29-3						
1420 GCT, 13 August 1938	0	11.31	30.53	23.27	.000	0.550
Wea. c Bar. 30.04	5	11.23	30.55	23.30	.023	0.552
Wind ∅ Sea W,1	10	10.77	30.55	23.38	.046	0.542
Temp: dry 53, wet 52	20	10.53	30.64	23.49	.090	0.522
	30	10.45	30.66	23.52	.134	0.521
	34	10.46	30.66	23.52	.152	0.521
Station 29-4						
1617 GCT, 13 August 1938	0	10.64	30.53	23.39	.000	0.543
Wea. c Bar. 30.05	5	10.52	30.55	23.42	.022	0.536
Wind NW,1 Sea W,1	10	10.51	30.59	23.45	.045	0.526
Temp: dry 54, wet 53	20	10.47	30.62	23.48	.089	0.526
	30	10.45	30.62	23.49	.133	0.521
	34	10.45	30.62	23.49	.151	0.527

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ_t (g/L)	ΔD (dyn m)	O_2 (mgat/L)
Station 29-5						
1817 GCT, 13 August 1938	0	10.48	30.26	23.20	,000	0.555
Wea. o,v Bar. 30.08	5	10.49	30.35	23.27	.023	0.545
Wind NW, 1 Sea W, 1	10	10.33	30.48	23.40	.046	0.538
Temp: dry 56, wet 55	20	10.31	30.53	23.44	.091	0.533
	30	10.30	30.53	23.44	.135	0.533
	34	10.29	30.55	23.46	.153	0.533
Station 29-6						
2010 GCT, 13 August 1938	0	10.59	30.17	23.11	.000	0.559
Wea. c Bar. 30.09	5	10.45	30.26	23.21	.024	0.555
Wind NNW,3 Sea W,1	10	10.30	30.46	23.39	.047	0.541
Temp: dry 55, wet 54	20	10.23	30.50	23.42	.091	0.538
	30	10.26	30.52	23.44	.136	0.530
	34	10.26	30.52	23.44	.154	0.538
Station 29-7						
2225 GCT, 13 August 1938	0	-	30.32	-	-	0.557
Wea. c Bar. 30.09	5	-	30.30	-	-	0.550
Wind WNW,3 Sea W,1	10	-	30.48	-	-	0.541
Temp: dry 54, wet 53	20	-	30.50	-	-	0.533
	30	-	30.50	-	-	0.529
	34	-	30.50	-	-	0.580
Station 29-8						
0020 GCT, 14 August 1938	0	10.46	30.52	23.41	.000	0.468
Wea. c Bar. 30.10	5	10.51	30.52	23.40	.022	0.546
Wind W,4 Sea W,2	10	10.49	30.52	23.40	.045	0.535
Temp: dry 54, wet 53	20	10.43	30.50	23.40	.090	0.532
	30	10.37	30.52	23.42	.135	0.532
	34	10.40	30.50	23.40	.153	0.535

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σt (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 29-9						
0215 GCT, 14 August 1938	0	10.49	30.52	23.40	.000	0.549
Wea. o Bar. 30.11	5	10.55	30.52	23.39	.022	0.550
Wind W,4 Sea W,2	10	10.56	30.52	23.39	.045	0.550
Temp: dry 53, wet 52	20	10.44	30.52	23.41	.090	0.541
	30	10.32	30.53	23.44	.135	0.529
	34	10.34	30.52	23.43	.152	0.532
Station 29-10						
0415 GCT, 14 August 1938	0	10.43	30.50	23.40	.000	0.542
Wea. o,d Bar. 30.10	5	10.51	30.52	23.40	.022	0.535
Wind W,4 Sea W,2	10	10.51	30.50	23.38	.045	0.544
Temp: dry 53, wet 52	20	10.45	30.50	23.40	.090	0.543
	30	10.29	30.53	23.45	.135	0.531
	34	10.31	30.57	23.47	.153	0.530
Station 29-11						
0624 GCT, 14 August 1938	0	10.42	30.46	23.37	.000	0.551
Wea. 0,d Bar. 30.11	5	10.48	30.46	23.36	.023	0.543
Wind WSW,6 Sea W,2	10	10.50	30.44	23.34	.045	0.550
Temp: dry 52, wet 52	20	10.37	30.46	23.38	.091	0.516
	30	10.29	30.59	23.49	.135	0.496
	34	10.30	30.59	23.49	.153	0.529
Station 29-12						
0820 GCT, 14 August 1938	0	10.41	30.46	23.37	.000	0.543
Wea. c Bar. 30.13	5	10.46	30.46	23.36	.023	0.550
Wind W,4 Sea W,3	10	10.45	30.46	23.36	.045	0.550
Temp: dry 51, wet 50	20	10.35	30.52	23.43	.090	0.531
	30	10.31	30.52	23.43	.135	0.534
	34	10.31	30.52	23.43	.153	0.518

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σt (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 29-13						
1027 GCT, 14 August 1938	0	10.44	30.44	23.35	.000	0.544
Wea. o.p Bar. 30.13	5	10.48	30.44	23.34	.023	0.546
Wind W,5 Sea W,3	10	10.52	30.44	23.33	.045	0.539
Temp: dry 50, wet 49	20	10.41	30.50	23.40	.091	0.529
	30	10.39	30.53	23.43	.136	0.528
	34	10.38	30.53	23.43	.153	0.527
Station 30-1						
57° 00' N, 160° 37' W (3)	0	10.40	31.83	24.44	.000	0.574
2125 GCT, 14 August 1938	5	10.40	31.82	24.43	.018	0.574
Wea. c Bar. 30.12	10	10.40	31.82	24.43	.035	0.572
Wind SE,2 Sea W,1	20	4.96	31.87	25.22	.066	0.508
Temp: dry 52, wet 51	30	4.86	31.87	25.24	.094	0.508
Depth 66.5 m., Bottom fne gy S	40	4.72	31.89	25.27	.121	0.517
	50	4.67	31.91	25.29	.148	0.519
	60	4.56	31.92	25.31	.175	0.523
Station 30-2						
2327 GCT, 14 August 1938	0	10.59	31.85	24.42	.000	0.567
Wea. c Bar. 30.10	5	10.40	31.82	24.43	.018	0.575
Wind ESE,1 Sea W,1	10	10.37	31.83	24.44	.035	0.572
Temp: dry 52, wet 51	15	10.38	31.83	24.44	.053	0.570
	20	9.85	31.85	24.54	.070	0.559
	30	4.71	31.91	25.28	.100	0.518
	40	4.53	31.92	25.31	.127	0.527
	50	4.57	31.92	25.31	.154	0.527
	60	4.52	31.92	25.31	.181	0.512
Station 30-3						
0117 GCT, 15 August 1938	0	10.66	31.87	24.42	.000	0.560
Wea. c Bar. 30.06	5	10.55	31.85	24.43	.018	0.570
Wind E,2 Sea W,1	10	10.38	31.85	24.46	.035	0.574
Temp: dry 53, wet 52	15	10.37	31.87	24.47	.052	0.569
	20	6.98	31.92	25.02	.069	0.569
	30	4.71	31.94	25.31	.097	0.520
	40	4.55	31.94	25.33	.123	0.524
	50	4.58	31.95	25.33	.150	0.524
	60	4.56	31.94	25.32	.177	0.519

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 30-4						
0320 GCT, 15 August 1938	0	10.82	31.85	24.38	.000	0.567
Wea. b,c Bar. ---	5	10.75	31.85	24.39	.018	0.567
Wind E,2 Sea W,1	10	10.42	31.85	24.45	.035	0.570
Temp: dry 52, wet 51	15	10.31	31.85	24.47	.053	0.567
	20	4.98	31.87	25.22	.068	0.498
	30	4.93	31.85	25.21	.096	0.499
	40	4.82	31.91	25.27	.123	0.506
	50	4.75	31.92	25.29	.150	0.515
	60	4.65	31.92	25.30	.177	0.515
Station 30-5						
0517 GCT, 15 August 1938	0	10.76	31.85	24.39	.000	0.567
Wea. b,c Bar. 30.02	5	10.66	31.85	24.41	.018	0.572
Wind E,2 Sea W,1	10	10.44	31.85	24.44	.035	0.574
Temp: dry 53, wet 51	15	10.38	31.85	24.46	.053	0.568
	20	4.98	31.85	25.21	.068	0.495
	30	4.94	31.87	25.23	.096	0.495
	40	4.92	31.87	25.23	.124	0.490
	50	4.87	31.87	25.23	.151	0.501
	60	4.72	31.91	25.28	.178	0.503
Station 30-6						
0633 GCT, 15 August 1938	0	--	--	--	--	---
Wea. b,c Bar. 30.02	15	10.39	31.85	24.45	.053	0.568
Wind E,2 Sea W,1	16	5.63	(31.87)	25.15	.056	0.569
Temp: dry 52, wet 51	17	5.13	31.87	25.21	.059	0.501
	18	4.97	31.85	25.21	.062	0.490
	19	5.00	31.87	25.22	.064	0.497
	20	4.97	31.87	25.22	.067	0.497
Station 30-7						
0816 GCT, 15 August 1938	0	10.73	31.83	24.38	.000	0.575
Wea. b,c Bar. 30.03	5	10.75	31.83	24.38	.018	0.566
Wind E,1 Sea W,1	10	10.47	31.85	24.44	.035	0.573
Temp: dry 52, wet 51	17	5.16	31.87	25.20	.057	0.515
	20	5.01	31.87	25.22	.066	0.499
	30	4.91	31.87	25.23	.093	0.502
	40	4.89	31.89	25.25	.121	0.509
	50	4.69	31.92	25.29	.148	0.521
	60	4.43	31.94	25.34	.175	0.524

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 30-8						
0945 GCT, 15 August 1938	0	10.67	31.85	24.41	.000	0.564
Wea. b,c Bar. 30.02	5	10.71	31.85	24.40	.018	0.567
Wind ESE,1 Sea W,1	10	10.48	31.85	24.44	.035	0.568
Temp: dry 52, wet 51	16	10.42	31.85	24.45	.056	0.568
	20	6.87	31.91	25.03	.069	0.571
	30	4.77	31.89	25.26	.097	0.508
	40	4.53	31.94	25.33	.124	0.514
	50	4.53	31.94	25.33	.151	0.521
	60	4.52	31.96	25.34	.177	0.511
Station 30-9						
1125 GCT, 15 August 1938	0	10.52	31.85	24.43	.000	0.556
Wea. c Bar. 29.97	5	10.55	31.85	24.43	.018	0.568
Wind SE,1 Sea W,1	10	10.30	31.85	24.47	.035	0.572
Temp: dry 52, wet 51	17	10.25	31.89	24.51	.059	0.577
	20	10.20	31.86	24.49	.070	0.578
	30	4.50	31.96	25.34	.100	0.528
	40	4.48	31.96	25.35	.126	0.523
	50	4.39	31.94	25.34	.153	0.511
	60	4.46	31.94	25.33	.179	
Station 30-10						
1323 GCT, 15 August 1938	0	10.37	31.87	24.47	.000	0.588
Wea. c Bar. 29.95	5	10.43	31.87	24.46	.017	0.584
Wind SE,1 Sea W,1	10	10.33	31.85	24.46	.035	0.588
Temp: dry 52, wet 51	18	9.90	31.85	24.53	.062	0.572
	20	6.45	31.94	25.11	.069	0.568
	30	4.54	31.96	25.34	.096	0.519
	40	4.48	31.96	25.35	.123	0.524
	50	4.50	31.96	25.34	.149	0.525
	60	4.48	31.94	25.33	.176	0.524
Station 30-11						
1530 GCT, 15 August 1938	0	10.43	31.85	24.45	.000	0.574
Wea. c Bar. 29.94	5	10.47	31.84	24.43	.018	0.578
Wind SE,1 Sea W,1	10	10.31	31.83	24.45	.035	0.568
Temp: dry 52, wet 51	17	8.30	31.84	24.77	.058	0.551
	20	5.30	31.82	25.15	.067	0.497
	30	4.84	31.85	25.22	.095	---
	40	4.69	31.85	25.24	.123	0.517
	50	4.69	31.92	25.29	.150	0.516
	60	4.54	31.94	25.33	.177	0.522

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σt (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 30-12						
1720 GCT, 15 August 1938	0	10.58	31.82	24.40	.000	0.563
Wea. c Bar. 29.88	5	10.61	31.83	24.40	.018	0.566
Wind SE,3 Sea W,2	10	10.48	31.83	24.42	.035	0.569
Temp: dry 52, wet 51	17	5.25	31.83	25.16	.058	0.499
	20	5.13	31.82	25.17	.066	0.497
	30	4.98	31.83	25.19	.094	0.495
	40	4.94	31.83	25.20	.122	0.497
	50	4.88	31.85	25.22	.149	0.502
	60	4.71	31.87	25.25	.177	0.508
Station 30-13						
1925 GCT, 15 August 1938	0	10.67	31.81	24.37	.000	0.564
Wea. c Bar. 29.89	5	10.67	31.82	24.38	.018	0.564
Wind ESE,3 Sea W,2	10	10.54	31.82	24.40	.036	0.572
Temp: dry 54, wet 52	15	5.38	31.82	25.14	.051	0.502
	20	5.07	31.83	25.18	.066	0.498
	30	4.98	31.83	25.19	.093	0.500
	40	4.97	31.85	25.21	.121	0.498
	50	4.86	31.85	25.22	.149	0.507
	60	4.62	31.90	25.29	.176	0.516
Station 30-14						
2110 GCT, 15 August 1938	0	10.70	31.83	24.38	.000	0.579
Wea. c Bar. 29.73	5	10.75	31.83	24.38	.018	0.577
Wind ESE,3 Sea. W,2	10	10.68	31.85	24.40	.036	0.579
Temp: dry 53, wet 52	14	10.47	31.83	24.42	.050	0.578
	20	5.04	31.85	25.20	.069	0.508
	30	4.97	31.85	25.21	.096	0.504
	40	4.86	31.89	25.25	.124	0.511
	50	4.66	31.92	25.30	.151	0.525
	60	4.53	31.91	25.30	.178	0.530
Station 31-1						
56° 46' N, 159° 23' W (2)	0	11.32	30.99	23.62	.000	0.530
0930 GCT, 21 August 1938	5	11.36	30.99	23.62	.021	0.536
Wea. c Bar. 30.09	10	11.10	31.08	23.73	.043	0.519
Wind S,4 Sea SSW,2	15	11.07	31.08	23.74	.063	0.522
Temp: dry 58, wet 56	20	11.09	31.08	23.74	.084	0.524
Depth 31.5 m., Bottom fne SG	28	11.05	31.11	23.76	.118	0.512

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σt (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 31-2						
1110 GCT, 21 August 1938	0	11.35	30.91	23.56	.000	0.534
Wea. c Bar. 30.09	5	11.40	30.91	23.55	.022	0.535
Wind S,5 Sea SW,2	10	11.13	31.06	23.71	.043	0.527
Temp: dry 56, wet 54	15	11.05	31.09	23.75	.064	0.523
	20	11.05	(31.12)	23.77	.085	0.519
	28	11.00	31.15	23.81	.118	0.511
Station 31-3						
1317 GCT, 21 August 1938	0	11.31	30.91	23.57	.000	0.525
Wea. c Bar. 30.09	5	11.35	30.91	23.56	.022	0.527
Wind SSW,4 Sea SW,4	10	11.29	30.97	23.61	.043	0.528
Temp: dry 56, wet 54	15	11.05	31.09	23.75	.064	0.520
	20	11.06	31.11	23.76	.085	0.523
	28	10.96	31.20	23.85	.118	0.509
Station 31-4						
1521 GCT, 21 August 1938	0	11.42	30.86	23.51	.000	0.532
Wea. c Bar. 30.10	5	11.49	30.86	23.49	.022	0.527
Wind SSW, 4 Sea SW,2	10	11.42	30.90	23.54	.044	0.525
Temp: dry 63, wet 60	15	11.25	30.99	23.64	.065	0.522
	20	11.05	31.09	23.75	.087	0.519
	28	10.94	31.20	23.86	.119	0.507
Station 32						
56° 56' N, 159° 32' W (2)	0	11.05	31.74	24.25	.000	0.555
1720 GCT, 21 August 1938	5	11.06	31.74	24.25	.018	0.554
Wea. o,p Bar. 30.11	10	(11.00)	31.76	24.28	.037	0.555
Wind SW,5 Sea SW,4	15	8.63	31.74	24.65	.054	0.514
Temp: dry 59, wet 59	20	7.42	31.71	24.80	.070	0.484
Depth 55 m.	30	7.32	31.69	24.80	.102	0.485
	40	7.28	31.71	24.82	.134	0.477
	50	7.20	31.73	24.84	.165	0.476

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 33-1						
56° 46' N, 159° 22' W (2)	0	11.70	30.68	23.32	.000	0.541
2045 GCT, 21 August 1938	5	11.59	30.70	23.35	.023	0.538
Wea. c Bar. 30.21	10	11.38	30.77	23.44	.045	0.530
Wind SSE,3 Sea SW,2	15	11.38	30.81	23.47	.067	0.525
Temp: dry 63, wet, 61	20	11.31	30.81	23.49	.090	0.529
Depth 25.5 m.						
Station 33-2						
2250 GCT, 21 August 1938	0	11.53	30.70	23.36	.000	0.535
Wea. c Bar. 30.22	5	11.54	30.72	23.38	.023	0.527
Wind SW,3 Sea SW,2	10.	11.35	30.82	23.49	.045	0.518
Temp: dry 64, wet 62	15	11.29	30.88	23.55	.067	0.513
	20	11.30	30.88	23.54	.089	0.515
Station 33-3						
0108 GCT, 22 August 1938	0	11.71	30.61	23.26	.000	0.524
Wea. c Bar. 30.22	5	11.46	30.75	23.41	.023	0.519
Wind SW,4 Sea SW,2	10.	11.32	30.88	23.54	.045	0.518
Temp: dry 65, wet 62	15	11.26	30.95	23.60	.067	0.500
	20	11.25	30.99	23.64	.088	0.514
Station 33-4						
0304 GCT, 22 August 1938	0	11.50	30.73	23.39	.000	0.526
Wea. c Bar. 30.23	5	11.44	30.82	23.47	.022	0.523
Wind SW,4 Sea SW,2	10	11.34	30.91	23.56	.044	0.520
Temp: dry 64, wet 62	15	11.29	30.93	23.58	.066	0.515
	20	11.30	30.95	23.60	.087	0.512

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 33-5						
0525 GCT, 22 August 1938	0	11.49	30.88	23.51	.000	0.504
Wea. c Bar. 30.23	5	11.53	30.88	23.50	.022	0.519
Wind SW,2 Sea SW,2	10	11.43	30.93	23.56	.044	0.518
Temp: dry 63, wet 61	15	11.32	30.95	23.59	.065	0.513
	20	11.34	30.95	23.59	.087	0.515
Station 34						
57° 06' N, 159° 40' W (1)	0	10.85	31.83	24.36	.000	0.563
0855 GCT, 22 August 1938	5	10.87	31.83	24.36	.018	0.556
Wea. c Bar. 30.24	10	10.86	31.83	24.36	.036	0.554
Wind SW,4 Sea SW,5	15	10.91	31.83	24.35	.054	0.557
Temp: dry 59, wet 57	20	10.10	31.82	24.48	.071	0.545
Depth 56 m.	30	7.16	31.74	24.86	.104	0.487
	40	7.06	31.74	24.87	.135	0.484
	50	7.04	31.74	24.87	.166	0.481
Station 35						
57° 14' N, 159° 47' W (1)	0	10.33	31.74	24.38	.000	0.563
1105 GCT, 22 August 1938	5	10.37	31.69	24.33	.018	0.565
Wea. c Bar. 30.25	10	10.39	31.69	24.33	.036	0.569
Wind SW, 4 Sea, SW,5	15	10.30	31.69	24.34	.054	0.568
Temp: dry 58, wet 56	20	9.10	31.69	24.54	.071	0.531
Depth 58 m.	30	7.44	31.69	24.78	.104	0.497
	40	7.38	31.69	24.79	.136	0.493
	50	7.34	31.69	24.79	.168	0.492
Station 36						
57° 24' N, 159° 56' W (1)	0	9.70	31.67	24.43	.000	0.573
1302 GCT, 22 August 1938	5	9.71	31.65	24.41	.018	0.573
Wea. o,r Bar. 30.25	10	9.61	31.65	24.43	.035	0.570
Wind SW,4 Sea SW,4	20	7.84	31.69	24.72	.069	0.516
Temp: dry 56, wet 54	30	7.53	31.69	24.77	.101	0.505
Depth 59 m.	40	7.50	31.69	24.77	.133	0.503
	50	7.52	31.67	24.75	.165	0.502
	55	7.47	31.69	24.78	.181	0.500

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 37						
57° 33' N, 160° 04' W (1)	0	9.12	31.69	24.53	.000	0.566
1459 GCT, 22 August 1938	5	9.14	31.69	24.53	.017	0.565
Wea. o,d Bar. 30.27	10	8.76	31.69	24.59	.034	0.563
Wind SW,4 Sea SW,4	20	7.86	31.73	24.75	.067	0.526
Temp: dry 54, wet 53	30	7.37	31.73	24.82	.099	0.510
Depth 58 m.	40	7.36	31.74	24.83	.130	0.508
	50	7.41	31.74	24.82	.161	0.508
	55	7.38	(31.74)	24.83	.177	
Station 38						
57° 42' N, 160° 12' W (1)	0	8.61	31.67	24.60	.000	0.552
1708 GCT, 22 August 1938	5	8.64	31.69	24.61	.017	0.548
Wea. o,r,m Bar. 30.28	10	8.37	31.67	24.63	.033	0.538
Wind SW,4 Sea SW,5	15	8.40	31.69	24.64	.050	0.532
Temp: dry 52, wet 51	20	8.26	31.69	24.66	.066	0.534
Depth 54 m.	30	8.20	31.69	24.67	.099	0.530
	40	8.18	31.69	24.67	.132	0.531
	50	(8.18)	31.69	24.67	.165	0.526
Station 39						
57° 50' N, 160° 20' W (1)	0	9.60	31.47	24.29	.000	0.569
1850 GCT, 22 August 1938	5	9.58	31.47	24.29	.018	0.568
Wea. o,r Bar. 30.30	10	9.62	31.47	24.28	.036	0.560
Wind SW,3 Sea SW,2	15	9.56	31.49	24.31	.055	0.565
Temp: dry 52, wet 51	20	8.36	31.65	24.62	.072	0.530
Depth 56 m.	30	7.88	31.73	24.75	.105	0.509
	40	7.92	31.73	24.74	.137	0.511
	50	7.89	31.73	24.75	.169	0.503
Station 40						
57° 59' N, 160° 28' W (1)	0	9.69	31.26	24.11	.000	0.564
2040 GCT, 22 August 1938	5	9.67	31.26	24.11	.019	0.566
Wea. o,p Bar. 30.28	10	9.65	31.29	24.14	.038	0.561
Wind S,3 Sea SW,2	15	9.55	31.42	24.26	.057	0.563
Temp: dry 54, wet 53	20	9.18	31.46	24.35	.075	0.551
Depth 50 m.	30	8.18	31.55	24.56	.110	0.509
	40	8.19	31.56	24.57	.144	0.501
	45	(8.18)	31.58	24.59	.161	0.503

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 41						
58° 08' N, 160° 36'W (1)	0	9.54	30.84	23.81	.000	0.545
2235 GCT, 22 August 1938	5	9.29	31.02	23.98	.020	0.533
Wea. o,m Bar. 30.29	10	8.74	31.15	24.17	.039	0.523
Wind S,3 Sea SW,2	15	8.44	31.18	24.24	.058	0.508
Temp: dry 54, wet 53	20	8.33	31.24	24.30	.076	0.510
Depth 43 m.	30	8.13	31.38	24.44	.112	0.505
	40	8.13	31.40	24.46	.147	0.505
Station 42						
58° 17' N, 160° 44' W (1)	0	9.46	30.64	23.66	.000	0.538
0020 GCT, 23 August 1938	5	9.42	30.64	23.67	.021	0.532
Wea. o,r,f Bar. 30.29	10	9.24	30.68	23.73	.042	---
Wind S,2 Sea SW,2	15	9.19	30.70	23.75	.063	0.530
Temp: dry 52, wet 52	20	9.18	30.70	23.75	.084	0.522
Depth 32 m.	28	9.16	30.70	23.76	.117	0.529
Station 43						
58° 29' N, 160° 53' W (2)	0	12.11	28.82	21.81	.000	0.530
0215 GCT, 23 August 1938	5	11.97	28.93	21.92	.030	0.515
Wea. o,p,z Bar. 30.29	10	11.58	29.20	22.20	.059	0.515
Wind WSW, 1 Sea SW,2	15	11.34	29.35	22.35	.087	0.514
Temp: dry 52, wet 52	20	11.14	29.51	22.51	.114	0.513
Depth 24.5 m.						
Station 44						
58° 30' N, 160° 34' W (2)	0	11.90	28.98	21.97	.000	0.520
0340 GCT, 23 August 1938	5	11.90	29.00	21.98	.029	0.515
Wea. c,z Bar. 30.29	10	11.89	29.00	21.98	.059	0.515
Wind WSW,1 Sea SW,2						
Temp: dry 52, wet 52						
Depth 16.5 m.						

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 45						
58° 22 ' N, 160° 26' W (2)	0	9.78	30.41	23.43	.000	0.534
0525 GCT, 23 August 1938	5	9.80	30.41	23.43	.022	0.535
Wea. o Bar. 30.28	10	9.85	30.43	23.44	.045	0.537
Wind ∅ Sea SW,2	15	9.79	30.43	23.45	.067	0.539
Temp: dry 52, wet 51	20	9.80	30.43	23.45	.089	0.535
Depth 29 m.	25	9.80	30.43	23.45	.111	0.538
Station 46						
58° 13' N, 160° 18' W (1)	0	9.50	30.84	23.81	.000	0.558
0710 GCT, 23 August 1938	5	9.12	30.99	23.99	.020	0.537
Wea. o,f Bar. 30.30	10	9.01	31.06	24.06	.040	0.532
Wind ∅ Sea SW,1	15	8.89	31.08	24.09	.059	0.533
Temp: dry 51, wet 50	20	8.86	31.08	24.10	.078	0.526
Depth 43.5 m., Bottom fne gy S	30	8.69	31.11	24.15	.116	0.527
	40	8.73	31.11	24.14	.154	0.526
Station 47						
58° 04' N, 160° 10' W (1)	0	9.84	31.11	23.97	.000	0.584
0900 GCT, 23 August 1938	5	9.72	31.18	24.04	.020	0.578
Wea. o,p Bar. 30.31	10	9.65	31.20	24.07	.039	0.574
Wind WSW,1 Sea SW,2	15	8.80	31.38	24.34	.058	0.538
Temp: dry 51, wet 50	20	8.51	31.44	24.43	.075	0.526
Depth 51 m., Bottom fne gy S	30	8.40	31.47	24.47	.110	0.525
	40	8.44	31.48	24.47	.145	0.526
	45	(8.40)	31.47	24.47	.162	
Station 48						
57° 54' N, 160° 02' W (1)	0	8.85	31.56	24.47	.000	0.562
1055 GCT, 23 August 1938	5	8.75	31.58	24.50	.017	0.556
Wea. o,p Bar. 30.31	10	8.67	31.65	24.57	.034	0.552
Wind N,2 Sea SW,2	20	8.65	31.64	24.57	.068	0.555
Temp: dry 51, wet 50	30	8.64	31.65	24.58	.102	0.552
Depth 51.5 m.	40	8.64	31.65	24.58	.136	0.554
	45	8.67	31.64	24.56	.153	0.551

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 49						
57° 45' N, 159° 53' W (1)	0	8.82	31.46	24.40	.000	0.564
1230 GCT, 23 August 1938	5	8.68	31.58	24.52	.017	0.555
Wea. o,r Bar. 30.31	10	8.62	31.58	24.52	.035	0.551
Wind N,1 Sea SW,2	20	8.58	31.60	24.55	.069	0.549
Temp: dry 50, wet 50	30	8.56	31.60	24.55	.103	0.549
Depth 52.5 m.	40	8.55	31.62	24.57	.137	0.549
	45	8.57	31.60	24.55	.154	0.547
Station 50						
57° 36' N, 159° 46' W (1)	0	8.90	31.51	24.43	.000	0.570
1405 GCT, 23 August 1938	5	8.87	31.55	24.46	.017	0.567
Wea. o,r Bar. 30.29	10	8.59	31.58	24.53	.035	0.549
Wind N,1 Sea SW,2	20	8.43	31.65	24.61	.069	0.542
Temp: dry 50, wet 50	30	8.38	31.65	24.61	.102	0.536
Depth 55.5 m.	40	8.33	31.65	24.62	.135	0.539
	50	8.32	31.67	24.64	.169	0.535
Station 51						
57° 27' N, 159° 39' W (1)	0	9.93	31.53	24.28	.000	0.594
1600 GCT, 23 August 1938	5	9.84	31.60	24.35	.018	0.587
Wea. o,r Bar. 30.28	10	9.05	31.62	24.49	.036	0.552
Wind N,1 Sea W,2	20	8.17	31.65	24.65	.070	0.527
Temp: dry 51, wet 50	30	8.04	31.67	24.68	.102	0.523
Depth 58.5 m.	40	7.98	31.67	24.69	.135	0.524
	50	8.02	31.67	24.68	.168	0.523
	55	(8.00)	31.69	24.70	.184	0.515
Station 52						
57° 18' N, 159° 30' W (1)	0	11.04	31.56	24.12	.000	0.551
1740 GCT, 23 August 1938	5	10.44	31.56	24.22	.019	0.532
Wea. o,r Bar. 30.28	10	9.24	31.64	24.48	.037	0.512
Wind N,1 Sea SW,2	20	8.34	31.64	24.61	.071	0.494
Temp: dry 52, wet 51	30	8.16	31.64	24.64	.104	0.490
Depth 59 m.	40	8.08	31.64	24.65	.137	0.496
	50	8.09	31.64	24.65	.170	0.490
	55	8.06	31.67	24.68	.187	0.490

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 53						
57° 09' N, 159° 23' W (1)	0	11.25	31.67	24.16	.000	0.548
1940 GCT, 23 August 1938	5	10.64	31.72	24.31	.018	0.543
Wea. o,r Bar. 30.25	10	8.84	31.69	24.58	.036	0.489
Wind N,1 Sea W,2	20	8.75	31.69	24.59	.070	0.488
Temp: dry 55, wet 53	30	8.58	31.67	24.60	.103	0.484
Depth 55.5 m.	40	8.58	31.69	24.62	.137	0.484
	50	8.59	(31.69)	24.61	.170	0.478
Station 54						
57° 00' N, 159° 15' W (1)	0	10.67	31.22	23.92	.000	0.581
2115 GCT, 23 August 1938	5	10.97	31.27	23.90	.020	0.512
Wea. o,r Bar. 30.25	10	11.06	31.29	23.90	.040	0.509
Wind N,1 Sea W,2	20	10.99	31.27	23.90	.080	0.503
Temp: dry 53, wet 52	30	10.96	31.29	23.92	.121	0.503
Depth 37.5 m.						
Station 55						
56° 48' N, 159° 11' W (2)	0	12.24	30.10	22.77	.000	0.531
2230 GCT, 23 August 1938	5	11.57	30.75	23.40	.024	0.512
Wea. o,r Bar. 30.25	10	11.51	30.81	23.45	.046	0.511
Wind N,1 Sea W,2	15	11.46	30.79	23.45	.068	0.510
Temp: dry 53, wet 52	20	11.47	30.81	23.46	.090	0.508
Depth 24 m.						
Station 56						
57° 08' N, 158° 44' W (1)	0	10.64	31.11	23.84	.000	0.535
0245 GCT, 24 August 1938	5	10.63	31.15	23.87	.020	0.524
Wea. o,r,z Bar. 30.22	10	10.67	31.13	23.85	.041	0.525
Wind N,1 Sea WNW,2	15	10.59	31.15	23.87	.061	0.529
Temp: dry 52, wet 52	20	10.60	31.14	23.87	.081	0.519
Depth 35.5 m.	30	10.58	31.17	23.89	.121	0.530

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 57						
57° 17' N, 158° 52' W (1)	0	9.98	31.31	24.10	.000	0.525
0350 GCT, 24 August 1938	5	10.01	31.33	24.11	.019	0.523
Wea. o,r,m Bar. 30.22	10	10.04	31.33	24.11	.038	0.519
Wind NNW,2 Sea W,1	20	9.96	31.35	24.14	.076	0.522
Temp: dry 52, wet 52	30	9.95	31.33	24.12	.114	0.521
Depth 47 m.	40	9.96	31.33	24.12	.152	0.524
Station 58						
57° 26' N, 158° 59' W (1)	0	9.22	31.44	24.32	.000	0.536
0515 GCT, 24 August 1938	5	9.25	31.42	24.30	.018	0.533
Wea. o,r,m Bar. 30.22	10	9.25	31.42	24.30	.036	0.532
Wind N,2 Sea W,2	20	9.21	31.44	24.33	.072	0.527
Temp: dry 51, wet 51	30	9.22	31.44	24.32	.109	0.530
Depth 50.5 m.	40	9.21	31.44	24.33	.145	0.528
	45	9.25	31.46	24.34	.163	0.533
Station 59						
57° 36' N, 159° 06' W(1)	0	9.51	31.42	24.26	.000	0.558
0720 GCT, 24 August 1938	5	9.52	31.42	24.26	.018	0.553
Wea. o,r,m Bar. 30.18	10	9.53	31.45	24.28	.037	0.555
Wind N,1 Sea W,2	20	9.50	31.42	24.27	.073	0.562
Temp: dry 50, wet 50	30	9.50	31.44	24.28	.110	0.561
Depth 50 m.	40	9.49	31.40	24.25	.147	0.565
	45	9.51	31.42	24.26	.165	0.562
Station 60						
57° 45' N, 159° 15' W (1)	0	9.81	31.04	23.92	.000	0.596
0710 GCT, 24 August 1938	5	9.62	31.22	24.09	.020	0.565
Wea. o,r Bar. 30.16	10	9.60	31.35	24.19	.039	0.569
Wind N,2 Sea W,2	20	9.51	31.36	24.22	.076	0.570
Temp: dry 51, wet 51	30	9.49	31.38	24.23	.113	0.569
Depth 45.5 m., Bottom S G	40	9.48	31.38	24.24	.150	0.571

STATION DESCRIPTION	D (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 61						
57° 55' N, 159° 22' W (1)	0	9.54	31.02	23.95	.000	0.553
1055 GCT, 24 August 1938	5	9.54	31.08	23.99	.020	0.552
Wea. o,r Bar. 30.13	10	9.58	31.09	23.99	.039	0.552
Wind N,2 Sea W,1	20	9.55	31.11	24.01	.079	0.554
Temp: dry 51, wet 51	30	9.51	31.09	24.00	.118	0.554
	35	9.51	31.11	24.02	.137	0.552
Station 62						
58° 04' N, 159° 30' W (1)	0	10.42	29.90	22.93	.000	0.555
1230 GCT, 24 August 1938	5	10.27	30.23	23.21	.024	0.550
Wea. o,r Bar. 30.11	10	9.95	30.62	23.57	.047	0.541
Wind NNW,2 Sea NW,1	20	9.67	30.89	23.82	.089	0.542
Temp: dry 51, wet 51	30	9.70	30.88	23.81	.130	0.541
Depth 40 m.	35	9.68	30.84	23.78	.150	0.541
Station 63						
58° 13' N, 159° 37' W (1)	0	10.12	30.10	23.14	.000	0.563
1415 GCT, 24 August 1938	5	10.04	30.30	23.31	.023	0.553
Wea. o,r Bar. 30.08	10	9.87	30.50	23.49	.046	0.532
Wind NNW,1 Sea NW,1	20	9.72	30.48	23.50	.090	0.523
Temp: dry 51, wet 51	30	9.66	30.50	23.52	.134	0.524
Depth 35.5 M.						
Station 64						
58° 21' N, 159° 44' W (1)	0	9.66	30.12	23.23	.000	0.522
1545 GCT, 24 August 1938	5	9.66	30.16	23.26	.023	0.520
Wea. o,r Bar. 30.06	10	9.68	30.17	23.26	.046	0.519
Wind NNW,3 Sea NNW,2	20	9.57	30.19	23.29	.092	0.519
Temp: dry 52, wet 52						
Depth 23 m.						

STATION DESCRIPTION	D (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 65						
58° 16' N, 159° 20' W (1)	0	11.00	29.79	22.75	.000	0.535
1805 GCT, 24 August 1938	5	11.00	29.81	22.77	.026	0.539
Wea. o,r Bar. 30.05	10	10.99	29.90	22.84	.051	0.534
Wind N,4 Sea N,3	20	10.99	29.90	22.84	.101	0.533
Temp: dry 53, wet 53						
Depth 24.5 m.						
Station 66						
58° 08' N, 159° 15' W (1)	0	10.95	29.72	22.70	.000	0.538
1920 GCT, 24 August 1938	5	10.96	29.72	22.70	.026	0.536
Wea. o,r Bar. 30.07	10	10.93	29.79	22.76	.051	0.530
Wind N,3 Sea W,2	20	10.87	29.83	22.80	.102	0.531
Temp: dry 52, wet 52						
Depth 27 m.						
Station 67						
58° 00' N, 159° 09' W	0	10.10	30.64	23.56	.000	0.547
2100 GCT, 24 August 1938	5	10.14	30.66	23.57	.022	0.547
Wea. o,r Bar. 30.08	10	10.08	30.66	23.58	.043	0.549
Wind N,4 Sea W,2	20	10.05	30.68	23.60	.086	0.543
Temp: dry 53, wet 53	30	10.05	30.68	23.60	.130	0.541
Depth 37.5						
Station 68						
57° 50' N, 159° 04' W	0	10.38	30.37	23.31	.000	0.551
2248 GCT, 24 August 1938	5	10.40	30.37	23.30	.023	0.548
Wea. o,p Bar. 30.12	10	10.30	30.52	23.43	.046	0.549
Wind NW,6 Sea W,2	20	9.88	30.97	23.85	.088	0.548
Temp: dry 54, wet 54	30	9.85	31.02	23.90	.129	0.547
Depth 40 m.	35	9.84	31.02	23.90	.149	0.553

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 69						
57° 41' N, 158° 57' W (1)	0	9.99	31.31	24.10	.000	0.562
0010 GCT, 25 August 1938	5	10.02	31.33	24.11	.019	0.561
Wea. o Bar. 30.14	10	10.01	31.35	24.13	.038	0.561
Wind W,2 Sea NW,1	20	9.94	31.35	24.14	.076	0.561
Temp: dry 53, wet 52	30	9.94	31.33	24.12	.114	0.556
Depth 46 m.	40	9.92	31.35	24.14	.152	0.559
Station 70						
57° 32' N, 158° 50' W (3)	0	9.78	31.40	24.20	.000	0.555
0110 GCT, 25 August 1938	5	9.80	31.38	24.18	.019	0.557
Wea. c Bar. 30.16	10	9.84	31.35	24.16	.037	0.552
Wind WNW,3 Sea W,2	20	9.76	31.44	24.24	.075	0.555
Temp: dry 53, wet 52	30	9.75	31.42	24.23	.112	0.555
Depth 44.5 m.	40	9.75	31.40	24.21	.149	0.544
Station 71						
57° 25' N, 158° 39' W (3)	0	9.57	31.42	24.25	.000	0.562
0315 GCT, 25 August 1938	5	9.56	31.42	24.26	.018	0.559
Wea. c Bar. 30.19	10	9.59	31.42	24.25	.037	0.558
Wind WNW,4 Sea WNW,3	20	9.53	31.42	24.26	.074	0.555
Temp: dry 53, wet 52	30	9.51	31.40	24.25	.110	0.554
Depth 36.5 m.						
Station 72						
57° 13' N, 158° 28' W (3)	0	11.46	30.93	23.55	.000	0.524
0440 GCT, 25 August 1938	5	11.50	30.91	23.53	.022	0.523
Wea. c Bar. 30.20	10	11.51	30.91	23.53	.044	0.518
Wind WNW,4 Sea WNW,3	18	11.39	30.95	23.58	.078	0.523
Temp: dry 53, wet 52						
Depth 22.5						

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 73						
57° 40' N, 158° 08' W	0	11.48	30.86	23.50	.000	0.528
0740 GCT, 25 August 1938	5	11.50	-	-	-	0.521
Wea. c Bar. 30.20	10	11.55	-	-	-	0.526
Wind WNW,4 Sea W,4	20	11.51	-	-	-	0.528
Temp: dry 52, wet 50	25	11.53	-	-	-	0.531
Depth 30 m.						
Station 74						
57° 49' N, 158° 15' W	0	11.77	30.61	23.25	.000	0.524
0855 GCT, 25 August 1938	5	11.81	30.61	23.24	.023	0.525
Wea. o,c Bar. 30.20	10	11.84	30.57	23.21	.046	0.528
Wind WNW,5 Sea W,4	20	11.81	30.55	23.20	.093	0.527
Temp: dry 51, wet 51	25	11.83	30.57	23.21	.117	0.529
Depth 31.5 m.						
Station 75						
57° 57' N, 158° 22' W	0	11.59	30.26	23.01	.000	0.534
1005 GCT, 25 August 1938	5	11.65	30.25	22.99	.024	0.533
Wea. o,c Bar. 30.20	10	11.62	30.32	23.05	.049	0.530
Wind WNW,5 Sea W,4	20	11.56	30.34	23.08	.097	0.535
Temp: dry 50, wet 49	30	11.57	30.35	23.09	.145	0.532
Depth 37.5 m.						
Station 76						
58° 07' N, 158° 30' W	0	11.77	28.66	21.74	.000	0.530
1115 GCT, 25 August 1938	5	11.82	28.66	21.73	.030	0.530
Wea. o,c Bar. 30.20	10	11.81	28.87	21.90	.060	0.530
Wind WNW,5 Sea W,4	20	11.69	29.27	22.23	.118	0.531
Temp: dry 50, wet 49	30	11.66	29.47	22.39	.174	0.532
Depth 36 m.						

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 77						
58° 12' N, 158° 14' W (1)	0	12.26	27.41	20.69	.000	0.539
1230 GCT, 25 August 1938	5	12.30	27.41	20.69	.035	0.539
Wea. c Bar. 30.23	10	12.25	27.70	20.92	.070	0.537
Wind WNW,4 Sea W,4	20	11.93	28.66	21.71	.135	0.527
Temp: dry 50, wet 49						
Depth 28 m.						
Station 78						
58° 03' N, 158° 08' W (1)	0	11.97	29.05	22.01	.000	0.529
1340 GCT, 25 August 1938	5	12.00	29.05	22.00	.029	0.535
Wea. b,c Bar. 30.24	10	12.02	29.07	22.02	.058	0.533
Wind WNW,3 Sea W,3	20	11.98	29.29	22.19	.116	0.537
Temp: dry 50, wet 49	25	11.93	29.25	22.17	.144	0.532
Depth 31 m.						
Station 79						
57° 53' N, 157° 58' W	0	12.39	27.29	20.58	.000	0.498
1455 GCT, 25 August 1938	5	12.53	27.29	20.55	.036	0.542
Wea. c Bar. 30.26	10	12.48	27.30	20.57	.072	0.543
Wind W,3 Sea W,3	13	12.43	27.32	20.59	.094	0.537
Temp: dry 51, wet 50						
Depth 17 m.						
Station 80						
56° 45' N, 160° 26' W (1)	0	11.39	31.64	24.12	.000	0.536
0818 GCT, 5 September 1938	5	11.40	31.64	24.12	.019	0.543
Wea. o Bar. 29.79	10	11.42	31.64	24.11	.038	0.543
Wind E,2 Sea NE,2	20	11.30	31.65	24.14	.076	0.543
Temp: dry 51, wet 51	30	11.30	31.64	24.13	.114	0.534
Depth 68 m.	40	11.01	31.67	24.21	.152	0.523
	50	7.95	31.73	24.74	.186	0.458
	60	7.84	31.74	24.76	.219	0.457

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 81						
56° 50' N, 160° 09' W (1)	0	11.44	31.65	24.12	.000	0.542
0945 GCT, 5 September 1938	5	11.47	31.64	24.10	.019	0.535
Wea. o Bar. 29.81	10	11.50	31.65	24.10	.038	0.542
Wind W,2 Sea NE,2	20	11.19	31.69	24.19	.076	0.530
Temp: dry 52, wet 51	30	11.09	31.71	24.22	.113	0.527
Depth 61 m.	40	7.73	31.76	24.79	.148	0.361
	50	7.72	31.80	24.83	.179	0.461
	55	7.71	31.76	24.80	.195	0.460
Station 82						
56° 55' N, 159° 50' W (1)	0	11.13	31.74	24.24	.000	0.539
1132 GCT, 5 September 1938	5	11.18	31.73	24.22	.018	0.539
Wea. c Bar. 29.83	10	11.23	31.74	24.22	.037	0.539
Wind SW,3 Sea SW,1	20	7.87	31.76	24.77	.072	0.471
Temp: dry 56, wet 54	30	7.72	31.76	24.80	.103	0.469
Depth 57 m.	40	7.70	31.78	24.81	.135	0.467
	50	7.69	31.76	24.80	.166	0.465
Station 83						
56° 59' N, 159° 35' W	0	11.29	31.67	24.16	.000	0.539
1252 GCT, 5 September 1938	5	11.30	31.69	24.17	.019	0.539
Wea. c Bar. 29.84	10	11.33	31.67	24.15	.038	0.536
Wind SW,3 Sea SW,1	20	9.45	31.69	24.48	.074	0.486
Temp: dry 56, wet 54	30	9.43	31.69	24.49	.108	0.482
Depth 56.5 m.	40	9.33	31.71	24.52	.143	0.479
	50	9.12	31.71	24.55	.177	0.473
Station 84						
57° 03' N, 159° 16' W	0	11.01	31.64	24.18	.000	0.538
1405 GCT, 5 September 1938	5	11.04	31.64	24.18	.019	0.540
Wea. c Bar. 29.83	10	11.08	31.65	24.18	.037	0.540
Wind SW,2 Sea SW,1	20	10.19	31.67	24.35	.074	0.508
Temp: dry 56, wet 54	30	9.94	31.65	24.37	.110	0.496
Depth 56 m.	40	9.91	31.69	24.41	.146	0.496
	50	(9.90)	31.66	24.39	.181	0.494

STATION DESCRIPTION	Z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 85						
57° 07' N, 159° 00' W (1)	0	11.15	31.35	23.93	.000	0.523
1550 GCT, 5 September 1938	5	11.19	31.36	23.93	.020	0.520
Wea. o,r Bar. 29.84	10	11.18	31.35	23.93	.040	0.518
Wind SW,2 Sea SW,1	20	11.04	31.36	23.96	.080	0.513
Temp: dry 56, wet 54	30	11.00	31.36	23.97	.119	0.512
Depth 51 m.	40	10.75	31.47	24.10	.158	0.488
	45	10.76	31.49	24.11	.177	0.503
Station 86						
57° 11' N, 158° 47' W (2)	0	11.74	31.00	23.56	.000	0.525
1709 GCT, 5 September 1938	5	11.78	31.00	23.55	.022	0.522
Wea. o,r Bar. 29.85	10	11.67	31.08	23.63	.043	0.513
Wind S,1 Sea S,1	20	11.54	31.08	23.66	.086	0.516
Temp: dry 54, wet 54	30	11.54	31.08	23.66	.128	0.513
Depth 45 m.	40	11.51	31.11	23.69	.171	0.512
Station 87						
57° 31' N, 158° 41' W (2)	0	9.91	31.46	24.23	.000	0.549
1931 GCT, 5 September 1938	5	9.96	31.44	24.21	.019	0.550
Wea. c Bar. 29.86	10	9.96	31.42	24.19	.037	0.549
Wind SE,1 Sea S,1	20	9.91	31.44	24.22	.075	0.544
Temp: dry 54, wet 53	30	9.91	31.44	24.22	.112	0.544
Depth 47.5 m.	40	9.92	31.46	24.23	.149	0.544
Station 88						
57° 26' N, 158° 58' W (2)	0	10.15	31.46	24.19	.000	0.541
2105 GCT, 5 September 1938	5	10.09	31.46	24.20	.019	0.536
Wea. c Bar. 29.87	10	10.10	31.44	24.18	.037	0.536
Wind SE,1 Sea S,1	20	10.05	31.46	24.21	.075	0.537
Temp: dry 54, wet 53	30	10.04	31.46	24.21	.112	0.536
Depth 51 m.	40	10.04	31.46	24.21	.149	0.535
	45	10.08	31.46	24.20	.168	0.532

STATION DESCRIPTION	Z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 89						
57° 23' N, 159° 14' W (2)	0	10.08	31.55	24.27	.000	0.534
2223 GCT, 5 September 1938	5	9.91	31.55	24.30	.018	0.529
Wea. c Bar. 29.87	10	9.87	31.55	24.31	.036	0.525
Wind SE,1 Sea S,1	20	9.80	31.56	24.33	.073	0.525
Temp: dry 54, wet 53	30	9.74	31.55	24.33	.109	0.523
Depth 53.5 m.	40	9.73	31.55	24.33	.145	0.525
	50	9.58	31.56	24.36	.181	0.522
Station 90						
57° 19' N, 159° 30' W	0	10.26	31.60	24.28	.000	0.539
2344 GCT, 5 September 1938	5	9.88	31.60	24.34	.018	0.551
Wea. c Bar. 29.86	10	9.80	31.58	24.34	.036	0.547
Wind ESE,1 Sea S,1	20	9.65	31.60	24.38	.072	0.527
Temp: dry 54, wet 53	30	9.62	31.60	24.39	.107	0.522
Depth 57 m.	40	9.60	31.60	24.39	.143	0.515
	50	9.55	31.60	24.40	.179	0.513
Station 91						
57° 14' N, 159° 51' W	0	10.29	31.65	24.32	.000	0.583
0104 GCT, 6 September 1938	5	10.30	31.67	24.33	.018	0.588
Wea. c Bar. 29.84	10	10.19	31.64	24.32	.036	0.568
Wind ESE,2 Sea S,1	20	9.46	31.65	24.45	.072	0.535
Temp: dry 53, wet 52	30	8.36	31.69	24.65	.106	0.488
Depth 61 m.	40	8.21	31.71	24.69	.139	0.485
	50	8.21	31.71	24.69	.171	0.486
	55	(8.21)	31.71	24.69	.188	0.485
Station 92						
57° 10' N, 160° 05' W	0	10.83	31.74	24.29	.000	0.551
0253 GCT, 6 September 1938	5	10.87	31.74	24.29	.018	0.551
Wea. c Bar. 29.83	10	10.68	31.74	24.32	.036	0.557
Wind ESE,2 Sea S,1	20	8.08	31.74	24.73	.071	0.493
Temp: dry 53, wet 52	30	7.49	31.74	24.81	.102	0.478
Depth 64 m.	40	7.43	31.74	24.82	.134	0.478
	50	7.45	31.74	24.82	.165	0.474
	60	7.36	31.76	24.85	.197	0.472

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 93						
57° 05' N, 160° 27' W (1)	0	10.95	31.71	24.25	.000	0.551
0351 GCT, 6 September 1938	5	10.99	31.67	24.21	.019	0.542
Wea. o,r Bar. 29.79	10	10.97	31.71	24.25	.037	0.549
Wind E,3 Sea E,1	20	10.65	31.74	24.32	.074	0.523
Temp: dry 53, wet 52	30	10.20	31.74	24.40	.109	0.523
Depth 64.5 m.	40	6.54	31.83	25.01	.142	0.474
	50	6.58	31.85	25.02	.172	0.472
	60	6.55	31.83	25.01	.201	0.474
Station 94						
57° 02' N, 160° 44' W (1)	0	10.85	31.71	24.26	.000	
0457 GCT, 6 September 1938	5	10.98	31.71	24.24	.018	0.554
Wea. c Bar. 29.79	10	10.73	31.74	24.31	.037	0.548
Wind E,3 Sea E,2	20	10.51	31.73	24.35	.073	0.540
Temp: dry 53, wet 52	30	10.45	31.73	24.35	.109	0.536
Depth 70 m.	40	6.95	31.76	24.90	.142	0.464
	50	6.89	31.80	24.94	.173	0.460
	60	6.86	31.78	24.93	.203	0.461
Station 95						
57° 11' N, 160° 53' W (1)	0	10.83	31.69	24.25	.000	0.556
0620 GCT, 6 September 1938	5	10.87	31.69	24.25	.018	0.561
Wea. c Bar. 29.76	10	10.89	31.67	24.23	.037	0.559
Wind ENE,3 Sea NE,1	20	10.22	31.73	24.39	.073	0.546
Temp: dry 54, wet 52	30	9.54	31.80	24.55	.108	0.551
Depth 65.5 m.	40	6.19	31.85	25.07	.139	0.473
	50	6.17	31.82	25.04	.169	0.473
	60	6.13	31.87	25.09	.198	0.477
Station 96						
57° 21' N, 161° 02' W (1)	0	10.58	31.73	24.33	.000	0.586
0746 GCT, 6 September 1938	5	10.62	31.73	24.32	.018	0.590
Wea. c Bar. 29.76	10	10.64	31.73	24.32	.036	0.585
Wind NE,4 Sea NE,3	20	10.09	31.76	24.43	.072	0.567
Temp: dry 53, wet 52	30	9.94	31.78	24.47	.107	0.550
Depth 62 m.	40	6.01	31.87	25.10	.138	0.467
	50	6.04	31.87	25.10	.167	0.466
	55	6.01	31.87	25.10	.182	0.468

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 97						
57° 25' N, 160° 45' W (1)	0	10.42	31.76	24.38	.000	0.578
0915 GCT, 6 September 1938	5	10.45	31.78	24.39	.018	0.578
Wea. c Bar. 29.75	10	10.47	31.76	24.37	.036	0.580
Wind NE,3 Sea NE,2	20	10.21	31.76	24.41	.071	0.549
Temp: dry 53, wet 52	30	7.72	31.80	24.83	.104	0.488
Depth 63 m.	40	7.10	31.83	24.94	.135	0.469
	50	7.08	31.83	24.94	.166	0.469
	60	7.01	31.83	24.95	.196	0.465
Station 98						
57° 29' N, 160° 28' W (1)	0	10.56	31.36	24.04	.000	0.567
1039 GCT, 6 September 1938	5	10.60	31.38	24.05	.019	0.569
Wea. c Bar. 29.74	10	10.64	31.38	24.05	.039	0.512
Wind NE,2 Sea NE,1	20	9.70	31.60	24.37	.076	0.552
Temp: dry 52, wet 51	30	8.30	31.73	24.69	.110	0.498
Depth 60 m.	40	7.93	31.78	24.78	.142	0.484
	50	7.95	31.78	24.78	.174	0.483
	55	7.91	31.78	24.78	.190	0.481
Station 99						
57° 33' N, 160° 09' W	0	9.41	31.56	24.39	.000	0.554
1200 GCT, 6 September 1938	5	9.47	31.58	24.39	.018	0.556
Wea. o Bar. 29.70	10	9.45	31.60	24.41	.035	0.551
Wind NE,1 Sea 0,0	20	9.14	31.62	24.48	.070	0.531
Temp: dry 52, wet 51	30	8.97	31.62	24.50	.105	0.515
Depth 55 m.	40	8.92	31.64	24.52	.139	0.509
	50	8.94	31.64	24.52	.174	0.506
Station 100						
57° 37' N, 159° 53' W	0	9.25	31.60	24.44	.000	0.547
1330 GCT, 6 September 1938	5	9.26	31.56	24.41	.018	0.547
Wea. c Bar. 29.69	10	9.24	31.60	24.45	.035	0.543
Wind NE,2 Sea NE,1	20	9.18	31.58	24.44	.070	0.542
Temp: dry 52, wet 51	30	9.20	31.56	24.42	.105	0.540
Depth 53 m.	40	9.19	31.60	24.45	.140	0.541
	50	9.21	31.58	24.43	.175	0.539

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 101						
57° 43' N, 159° 35' W	0	9.41	31.53	24.36	.000	0.557
1455 GCT, 6 September 1938	5	9.47	31.55	24.37	.018	0.556
Wea. c, Bar. 29.67	10	9.48	31.56	24.38	.036	0.556
Wind NE,3 Sea NE, 1	20	9.43	31.56	24.38	.071	0.549
Temp: dry 52, wet 51	30	9.42	31.55	24.38	.107	0.548
Depth 48.5 m.	40	9.43	31.56	24.38	.142	0.548
	45	9.44	31.56	24.38	.160	0.546
Station 102						
57° 46' N, 159° 17' W (1)	0	10.30	31.29	24.03	.000	0.533
1619 GCT, 6 September 1938	5	10.34	31.27	24.01	.020	0.539
Wea. o,r Bar. 29.63	10	10.36	31.31	24.04	.039	0.535
Wind NE,4 Sea NE,3	20	10.24	31.31	24.06	.078	0.534
Temp: dry 53, wet 52	30	10.08	31.42	24.17	.116	0.534
Depth 46 m.	40	10.04	31.46	24.21	.153	0.534
Station 103						
57° 50' N, 159° 00' W (1)	0	11.87	29.18	22.13	.000	0.533
1732 GCT, 6 September 1938	5	11.89	29.20	22.14	.029	0.530
Wea. o,r Bar. 29.62	10	11.49	29.94	22.78	.055	0.531
Wind E,5 Sea E,6	20	11.19	30.32	23.13	.105	0.523
Temp: dry 55, wet 54	30	10.85	30.72	23.50	.150	0.524
Depth 43 m.	40	10.60	31.09	23.83	.193	0.534
Station 104						
58° 01' N, 159° 09' W (1)	0	10.97	30.26	23.12	.000	0.542
1914 GCT, 6 September 1938	5	10.99	30.28	23.13	.024	0.542
Wea. o,r Bar. 29.63	10	11.02	30.28	23.13	.048	0.539
Wind ESE 6, Sea ESE,6	20	10.79	30.41	23.27	.095	0.543
Temp: Dry 55, wet 54	30	10.75	30.43	23.29	.142	0.535
Depth 39 m.						

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 105						
58° 11'N, 159° 18' W (1)	0	11.51	29.63	22.54	.000	0.530
2033 GCT, 6 September 1938	5	11.54	29.63	22.53	.027	0.531
Wea. o,r Bar. 29.62	10	11.54	29.61	22.52	.053	0.532
Wind E,6 Sea E,6	20	11.39	29.69	22.61	.106	0.533
Temp: dry 54, wet 54						
Depth 28.5 m						
Station 106						
58° 07' N, 159° 37' W(1)	0	11.01	30.05	22.95	.000	0.533
2142 GCT, 6 September 1938	5	11.02	30.07	22.96	.025	0.534
Wea. o,r Bar. 29.59	10	10.98	30.17	23.05	.049	0.536
Wind E,6 Sea. E,6	20	10.58	30.55	23.41	.095	0.539
Temp: dry 54, wet 54	30	10.41	30.64	23.51	.140	0.529
Depth 39.5 m						
Station 107						
58° 03' N, 159° 56' W (1)	0	10.21	30.93	23.77	.000	0.540
2307 GCT, 6 September 1938	5	10.27	30.93	23.76	.021	0.546
Wea. O,r Bar. 29.57	10	10.22	30.97	23.80	.041	0.539
Wind E,6 Sea E,6	20	9.98	31.08	23.92	.082	0.541
Temp: dry 54, wet 54	30	9.80	31.09	23.96	.122	0.543
Depth 39 m.						
Station 108						
57° 58' N, 160° 14' W (1)	0	9.96	30.73	23.65	.000	0.532
0018 GCT, 7 September 1938	5	10.02	30.72	23.64	.021	0.530
Wea. o,r Bar. 29.54	10	10.03	30.72	23.64	.043	0.526
Wind E,6 Sea E,6	20	9.82	30.82	23.75	.085	0.522
Temp: dry 54, wet 52	30	9.58	31.02	23.94	.126	0.512
Depth 51 m.	40	9.38	31.11	24.04	.165	0.503

STATION DESCRIPTION	E (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 109						
57° 54' N, 160° 33' W (1)	0	10.15	31.02	23.85	.000	0.562
0155 GCT, 7 September 1938	5	10.20	31.00	23.82	.020	0.562
Wea. o,r Bar. 29.48	10	10.23	31.00	23.82	.041	0.562
Wind E,6 Sea E,6	20	10.07	31.08	23.91	.081	0.567
Temp: dry 54, wet 54	30	9.35	31.27	24.17	.120	0.525
Depth 51.5 m.	40	8.78	31.51	24.45	.157	0.479
Station 110						
57° 49' N, 160° 52' W (1)	0	10.51	30.82	23.63	.000	0.553
0300 GCT, 7 September 1938	5	10.54	30.84	23.64	.021	0.548
Wea. o,r Bar. 29.47	10	10.58	30.84	23.64	.043	0.555
Wind E,6 Sea E,6	20	10.21	30.88	23.73	.085	0.562
Temp: dry 54, wet 54	30	8.40	30.88	24.01	.125	0.473
Depth 49 m.	40	8.19	30.81	23.99	.165	0.472
Station 111						
57° 45' N, 161° 10' W (1)	0	10.52	31.02	23.79	.000	0.550
0422 GCT, 7 September 1938	5	10.58	31.00	23.76	.021	
Wea. c Bar. 29.44	10	10.56	31.08	23.83	.041	0.549
Wind E,5 Sea E,6	20	10.25	31.20	23.97	.081	0.543
Temp: dry 53, wet 53	30	7.46	31.76	24.83	.117	0.543
Depth 48.5 m.	40	7.42	31.74	24.82	.148	0.465
Station 112						
57° 40' N, 161° 28' W (1)	0	9.95	30.88	23.77	.000	0.555
0547 GCT, 7 September 1938	5	10.00	30.86	23.75	.021	0.559
Wea. c Bar. 29.40	10	10.05	30.86	23.74	.042	0.559
Wind NE,4 Sea NE,5	20	7.31	30.86	24.15	.081	0.464
Temp: dry 53, wet 52	30	7.18	30.93	24.22	.119	0.460
Depth 51 m.	40	7.17	30.93	24.22	.156	0.460

STATION DESCRIPTION	E (m)	T (°C)	S (°/oo)	σ t (g/L)	△ D (dyn m)	O_2 (mgat/L)
Station 113						
57° 50' N, 161° 38' W (1)	0	9.54	(30.95)	23.89	.000	0.557
0703 GCT, 7 September 1938	5	9.56	30.95	23.89	.020	0.558
Wea. c Bar. 29.39	10	9.61	30.95	23.88	.040	0.558
Wind NE,4 Sea NE,5	20	8.25	31.22	24.30	.079	0.477
Temp: dry 53, wet 52	30	8.19	31.22	24.31	.115	0.474
Depth 42 m.						
Station 114						
58° 01' N, 161° 46' W (1)	0	9.45	30.90	23.87	.000	0.554
0830 GCT, 7 September 1938	5	9.45	30.86	23.84	.020	0.555
Wea. c Bar. 29.39	10	9.46	30.88	23.85	.041	0.555
Wind NE,4 Sea NE,5	20	9.16	30.90	23.91	.081	0.548
Temp: dry 53, wet 53	30	9.01	31.22	24.18	.120	0.555
Depth 54 m.	40	7.94	31.26	24.37	.156	0.549
	50	7.96	31.26	24.37	.192	0.549
Station 115						
58° 06' N, 161° 31' W (1)	0	9.42	30.64	23.67	.000	0.533
0955 GCT, 7 September 1938	5	9.43	30.64	23.67	.021	0.529
Wea. c Bar. 29.39	10	9.45	30.64	23.66	.042	0.525
Wind ENE,4 Sea NE,5	20	8.96	30.82	23.88	.084	0.503
Temp: dry 52, wet 52	30	8.73	30.93	24.00	.124	0.491
Depth 40 m.						
Station 116						
58° 12' N, 161° 17' W (1)	0	9.30	30.81	23.82	.000	0.530
1122 GCT, 7 September 1938	5	9.33	30.82	23.82	.020	0.534
Wea. c Bar. 29.37	10	9.35	30.82	23.82	.041	0.528
Wind ENE,3 Sea NE,5	20	9.17	30.82	23.85	.082	0.528
Temp: dry 52, wet 52	30	9.17	30.82	23.85	.122	0.520
Depth 47 m.	40	9.14	30.82	23.85	.163	0.523

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σt (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 117						
58° 18' N, 161° 02' W	0	9.85	30.59	23.56	.000	0.534
1235 GCT, 7 September 1938	5	9.89	30.57	23.54	.022	0.538
Wea. c Bar. 29.35	10	9.92	30.61	23.57	.043	0.538
Wind ENE,5 Sea ENE,5	20	9.79	30.64	23.61	.087	0.535
Temp: dry 52, wet 52	30	9.72	30.68	23.65	.129	0.534
Depth 39 m.						
Station 118						
58° 24' N, 160° 47' W	0	10.17	30.37	23.34	.000	0.554
1410 GCT, 7 September 1938	5	10.20	30.35	23.32	.023	0.543
Wea. o Bar. 29.33	10	10.24	30.39	23.34	.046	0.539
Wind ENE,6 Sea ENE,6	20	10.18	30.37	23.34	.091	0.546
Temp: dry 52, wet 52						
Depth 30 m.						
Station 119						
58° 29' N, 160° 31' W (2)	0	----	29.85			
1536 GCT, 7 September 1938	5	----	29.83			
Wea. c Bar. 29.34	10	----	29.85			
Wind ENE,6 Sea ENE,6						
Temp: dry 52, wet 52						
Depth 18 m.						
Station 120						
58° 25' N, 160° 50' W (2)	0	10.06	30.50	23.46	.000	0.544
1702 GCT, 7 September 1938	5	10.09	30.44	23.41	.022	0.545
Wea. o Bar. 29.30	10	10.16	30.48	23.43	.045	0.545
Wind ENE,7 Sea NE,6	20	10.13	30.53	23.47	.089	0.547
Temp: dry 54, wet 53	30	10.14	30.53	23.47	.133	0.545
Depth 34.5 m.						

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σt (g/L)	Δ D (dyn m)	O_2 (mgat/L)
Station 121						
58° 21' N, 161° 06' W (1)	0	9.72	30.79	23.74	.000	0.538
1827 GCT, 7 September 1938	5	9.74	30.81	23.75	.021	0.536
Wea. o,r Bar. 29.29	10	9.67	30.81	23.76	.042	0.536
Wind ENE,7 Sea NE,6	20	9.44	30.84	23.82	.083	0.533
Temp: dry 54, wet 53	30	9.30	30.84	23.84	.124	0.531
Depth 46.5 m.	40	9.25	30.88	23.88	.164	0.527
Station 122						
58° 17' N, 161° 26' W (1)	0	9.87	30.81	23.73	.000	0.545
1945 GCT, 7 September 1938	5	9.89	30.81	23.73	.021	0.544
Wea. o,r Bar. 29.25	10	9.88	30.82	23.74	.042	0.544
Wind NE,6 Sea NE,6	20	9.24	30.86	23.87	.083	0.525
Temp: dry 54, wet 53	30	9.22	30.84	23.86	.123	0.520
Depth 43.5 m.	40	9.16	30.88	23.90	.164	0.520
Station 123						
58° 13' N, 161° 44' W (1)	0	9.39	30.90	23.88	.000	0.552
2102 GCT, 7 September 1938	5	9.39	30.90	23.88	.020	0.551
Wea. o,r Bar. 29.25	15	9.36	30.91	23.89	.061	0.548
Wind NE,6 Sea NE,6	25	9.22	30.97	23.96	.100	0.543
Temp: dry 54, wet 53	35	8.77	31.02	24.06	.140	0.514
Depth 50 m.	45	8.33	31.15	24.23	.177	0.474
Station 124						
57° 57' N, 162° 04' W	0	9.92	31.33	24.13	.000	0.566
2324 GCT, 7 September 1938	5	9.96	31.31	24.10	.019	0.566
Wea. o,r Bar. 29.24	10	9.98	31.31	24.10	.038	0.565
Wind NE,6 Sea NE,6	20	8.68	31.69	24.60	.074	0.573
Temp: dry 54, wet 53	30	7.28	31.76	24.85	.106	0.489
Depth 46.5 m.	40	7.32	31.78	24.87	.137	0.494

STATION DESCRIPTION	z (m)	T (°C)	S (°/oo)	σt (g/L)	ΔD (dyn m)	O_2 (mgat/L)
Station 125						
57° 40' N, 162° 24' W	0	8.65	31.83	24.71	.000	0.578
0138 GCT, 8 September 1938	5	8.70	31.85	24.72	.016	0.589
Wea. o,r Bar. 29.22	10	8.68	31.85	24.73	.032	0.579
Wind NE,5 Sea NE,5	20	7.11	31.94	25.02	.063	0.472
Temp: dry 53, wet 52	30	7.04	31.96	25.05	.093	0.468
Depth 47 m.	40	7.04	31.96	25.05	.122	0.468
Station 126						
57° 23' N, 162° 44' W (1)	0	8.82	31.85	24.71	.000	0.578
0344 GCT, 8 September 1938	5	8.87	31.85	24.70	.016	0.578
Wea. o Bar. 29.21	10	8.87	31.87	24.71	.033	0.578
Wind NNW,5 Sea N,5	20	8.74	31.89	24.75	.065	0.566
Temp: dry 51, wet 51	30	6.27	31.98	25.16	.095	0.468
Depth 52.5	40	6.00	32.01	25.22	.123	0.464
	47	5.94	32.01	25.22	.142	0.461
Station 127						
57° 06' N, 163° 03' W (1)	0	9.33	31.76	24.56	.000	0.561
0610 GCT, 8 September 1938	5	9.39	31.71	24.51	.017	0.564
Wea. o,f Bar. 29.23	10	9.42	31.71	24.50	.034	0.560
Wind NNW,6 Sea NW,6	20	7.94	31.76	24.76	.067	0.538
Temp: dry 51, wet 51	30	4.68	31.98	25.34	.097	0.476
Depth 62 m.	40	4.61	31.98	25.35	.123	0.477
	50	4.61	31.98	25.35	.149	0.475
	57	4.53	32.00	25.37	.168	0.477
Station 128						
56° 50' N, 163° 22' W (1)	0	9.63	31.60	24.38	.000	0.549
0816 GCT, 8 September 1938	5	9.65	31.58	24.37	.018	0.550
Wea. o,d Bar. 29.26	10	9.69	31.56	24.34	.036	0.537
Wind NW,6 Sea NW,6	20	9.65	31.60	24.38	.072	0.552
Temp: dry 51, wet 50	30	3.67	31.96	25.43	.102	0.468
Depth 72 m.	40	3.61	31.98	25.45	.128	0.470
	50	3.68	31.96	25.43	.153	0.468
	60	3.67	31.96	25.43	.179	0.465

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
1	020	0930	5	.42	034
		0920	18	.50	329
2	000	1140	5	.47	029
		1130	40	.28	354
3	255	1410	5	.30	084
		1404	55	.26	204
4	233	1620	5	.66	129
		1610	55	.14	139
5	147	1910	5	.74	219
		1855	67	.28	309
6	107	2135	5	.58	279
		2120	69	.67	329
7	090	2350*	5	.79	224
			56.5	.67	349
8	240	0155*	5	.38	039
			57	.29	349
9	242	0345*	5	.78	114
			55	.58	129
10	255	0624	(5)	.98	119
		0618	48	.79	139
11-1	242	0840	5	.52	109
		0832	41	.22	179
11-2	125		DS		305
		1200	5	.80	229
		1150	41	.79	269
11-3	---		DS		095
		1350	5	.73	219
		1330	41.5	.59	244
11-4	---		DS		120
		1550	(5)	.07	199
		1540	41	(.28)	209
11-5	---		DS		048
		1845	5	.29	079
		1830	41	.40	064

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
12	008		DS		139
		2030	5	.48	179
		2020	51	.21	019
13	098		DS		262
		2300	5	.85	319
		2250	46	.30	279
14	120		DS		205
		0130	5	.58	189-209
		0118	43.5	.93	079
15	045		DS		135
		0340	5	.97	139
		0330	39.5	.97	099
16	208		DS		043
		2035	5	.83	092
		2010	27	.58	135
17	207		DS		072
		2245	5	.29	319-019(340)
		2225	37	.25	074
18	110		DS		237
		0110	5	.67	303
		0059	43	.41	309
19	150		DS		295
20	197		DS		035
21	210		DS		040
22	020		DS		230
		1555	5	.13	014
		1540	43	.38	351
23	000		DS		210
		1800	5	.38	076
		1745	57	.57	139
28	290		DS		020
29-1	290		DS		110
		1110	5	.87	124
		1050	36	.48	121

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
29-2	310		DS		045
		1255	5	.12	309
		1245	36	.39	245
29-3	098		DS		288
		1525	5	1.58	219
		1453	36	.80	269
29-4	108		DS		295
		1640	(5)	1.57	159-219 (190)
		1623	36	.91	284
29-5	192		DS		342
		1905	5	.76	209
		1843	36	.42	309
29-6	281		DS		064
		2037	5	.46	099-169 (145)
		2025	36	.32	066
29-7	287		DS		127
		2345	5	.80	101
		2320	36	.38	092
29-8	---		DS		125
		0050	5	.33	096
		0035	36	.14	099
30-1	242		DS		042
		2220	5	.64	134
		2155	66.5	.29	109-179 (153)
30-2	195		DS		007
		0055	5	.41	135
		0045	66.5	.25	199-239 (211)
30-3	056		DS		261
		0101	5	.34	Variable
		0145	66.5	.38	289-349 (327)
30-4	050		DS		230
		0410	5	.47	029-079 (063)
		0400	66.5	.44	279-029 (350)
30-5	150		DS		100
		0555	5	.24	069-119 (096)
		0545	66.5	.20	059-189 (149)

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
30-6	---	0742	12	(.59) /3/	
		0732	15	(.49) /3/	
		0702	16	(.40) /1/	
		0725	17	(.48) /7/	
		0707	18	(.44) /1/	
		0710	19	(.42) /1/	
		0715	20	(.47) /4/	
30-7	203		DS		028
		0840	5	.84	135
		0830	66.5	.40	155
30-8	223		DS		055
		0920	5	.99	139
		0915	66.5	.42	165
30-9	218		DS		038
		1153	5	.72	132
		1140	66.5	.27	189
30-10	106		DS		246
		1415	5	1.29	219-299 (257)
		1400	66.5	.53	306
30-11	092		DS		252
		1605	5	.72	358
		1550	66.5	.53	341
30-12	111		DS		269
		1810	5	.66	209-279 (257)
		1747	66.5	.35	005
31-2	163	1110	DS		303
	185	1122	DS		350
31-3	222		DS		032
31-4	237		DS		042
33-1	073		DS		238
	084		DS		254
		2135	5	(1.40) /2/	
		2145	10	(1.12) /4/	

Station	Ship's Head (°T)	Time (GCT)	Depth (m)	Speed (kts)	Direction (°T)
33-3	225		DS		305
33-4	248		DS		333
		0336	5	(1.70) /4/	
		0347	10	(1.56) /4/	
		0353	20	(1.23) /3/	
37	215		DS		020
38	005		DS		220
39	275		DS		075
42	115		DS		270
43	225		DS		035
44	237		DS		057
45	245		DS		335
46	240		DS		045
47	135		DS		045
48	077		DS		025
49	075		DS		255
50	195		DS		285
51	221		DS		056
52	193		DS		358
53	310		DS		040
54	050		DS		215
55	065		DS		235
56	000		DS		215
57	230		DS		035
58	252		DS		072
59	245		DS		060
60	257		DS		177
61	058		DS		238
62	060		DS		230
63	035		DS		220
64	319		DS		159
65	315		DS		125
66	305		DS		080

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